

Assessment of compliance with the Code of Practice for Official Statistics

Statistics from the Farm Business Survey Rotating Modules

*(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 sets of statistics from the rotating modules in the Farm Business Survey⁴ (FBS), produced by the Department for Environment, Food and Rural Affairs (Defra) and published in:

- *Water Usage in Agriculture and Horticulture*⁵ (referred to here as *Water Usage*);
- *Countryside Maintenance and Management*⁶ (referred to here as *Countryside Maintenance*);
- *Farm Business Management Practices*⁷ (referred to here as *Management Practices*); and
- *Energy Use on Farms*⁸ (referred to here as *Energy Use*).

1.1.2 This report is shorter than normal. In particular, section 3 adopts an ‘exception reporting’ approach - it includes text only to support the Requirements made to strengthen compliance with the *Code* and Suggestions made to improve confidence in the production, management and dissemination of these statistics. This abbreviated style of report reflects the Head of Assessment’s consideration of aspects of risk and materiality⁹. The Assessment team nonetheless assessed compliance with all parts of the *Code of Practice* and has commented on all those in respect of which some remedial action is recommended.

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 *Water Usage in Agriculture and Horticulture*, *Countryside Maintenance and Management*, *Farm Business Management Practices* and *Energy Use on*

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/farmmanage/fbs/>. The main outputs from the Farm Business Survey were assessed in Assessment Report 72 (ibid 1).

⁵ <http://www.defra.gov.uk/statistics/foodfarm/farmmanage/fbs/water-usage/>

⁶ <http://www.defra.gov.uk/statistics/foodfarm/farmmanage/fbs/envcountryman/>

⁷ <http://www.defra.gov.uk/statistics/foodfarm/farmmanage/fbs/farmmanagepractice/>

⁸ <http://www.defra.gov.uk/statistics/foodfarm/farmmanage/fbs/energy/>

⁹ <http://www.statisticsauthority.gov.uk/assessment/assessment/guidance-about-assessment/criteria-for-deciding-upon-the-format-of-an-assessment-report.pdf>

Farms can be designated as National Statistics, subject to Defra implementing the enhancements listed in section 1.5 and reporting them to the Authority by February 2012.

1.3 Summary of strengths and weaknesses

- 1.3.1 Defra engages primarily with policy colleagues within Defra about the topics and timing of the modules, to ensure that they are relevant and useful to initiatives in the farming sector. However, Defra could engage more effectively with non-government users. Defra does not publish any documentation about the ways in which these statistics are used, or by whom. Defra's plans for these modules are still being developed. It is not yet clear how the modules are decided upon, who can input to the decision-making, and when each of the modules will be included in the FBS.
- 1.3.2 The modules are carried out as part of the FBS, which is an established and well-documented survey. The proposed extra questions are discussed within Defra and piloted. However the releases could provide more information about the quality of the statistics, and could link to the more general FBS information about methods and quality.
- 1.3.3 Defra publishes comprehensive information¹⁰ about costs and burden of the FBS and the Irrigation Survey (the latter of which is used as a source for the statistics presented in *Water Usage in Agriculture and Horticulture*). The releases contain some good commentary and contextual information but this could be improved by better definitions and the inclusion of time series.

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	Take steps to develop a greater understanding of the use made of the statistics, including use by non-government users, publish the relevant information and assumptions and use them to better support the use of the statistics (para 3.1).
Requirement 2	Adopt systematic and transparent statistical planning arrangements for the FBS rotating modules (para 3.2).

¹⁰ <http://www.defra.gov.uk/statistics/national-statistics/survey-control/>

- Requirement 3** Provide details of any methods specific to the FBS modules and link to relevant FBS methods information (para 3.4).
- Requirement 4** Provide more information about quality and reliability of the statistics from the FBS modules (para 3.6).
- Requirement 5** Improve the commentary in the releases by providing more contextual information about the statistics, references to supporting evidence where appropriate, glossaries of terms, and time series where appropriate (para 3.7).
- Requirement 6** Publish tables in a format that encourages analysis and re-use (para 3.8).

2 Subject of the assessment

- 2.1 The Farm Business Survey (FBS) is an annual sample survey of around 2,000 farm businesses carried out on behalf of Defra by a consortium of FBS Research Centres. The survey collects farm-level economic data in a number of core modules, covering aspects of farm business such as rents, labour usage and household income. The statistics from the core FBS were assessed in December 2010 in Assessment Report 72¹¹.
- 2.2 Since 2005, Defra has included extra modules of questions in the FBS on particular topics of interest, such as energy use on farms, countryside maintenance activities, farmers' management skills and water use on farms. Defra refers to these as 'rotating modules'.
- 2.3 Supplementary questions to collect data to produce the statistics presented in *Countryside Maintenance* were included in 2005/06, 2006/07 and 2008/09. These collected data on countryside and agri-environmental practices¹² on farms. The statistics from this module are used by Defra to monitor the impact of agri-environmental schemes on farm output and farm profitability; to identify possible relationships between production and environmental practices; and to help predict the likely environmental impacts of changes in farm behaviour. The statistics have also been used by organisations from across the farming sector with an interest in the CFE.
- 2.4 Supplementary questions to collect data to produce the statistics presented in *Management Practices* were included once, in 2007/08. These collected data on the business management techniques, skills and qualifications that farmers use to make business decisions. The statistics from this module help to explain farm businesses' behaviours and how these vary according to economic performance, farm type and farm size. Defra used these statistics to inform its *Action Plan for Skills in Farming*¹³.
- 2.5 Supplementary questions to collect data to produce the statistics presented in *Energy Use* were included in 2007/08. These collected data on physical quantities of energy inputs, such as fuel and fertiliser. The statistics have been used by Defra to support policy development in areas such as climate change and by the Department of Energy and Climate Change (DECC) to monitor greenhouse gas emissions from commercial farming. The data has also been used in a Defra-commissioned study carried out and published by Cranfield University.
- 2.6 Supplementary questions to collect data to produce the statistics presented in *Water Usage* were included in 2009/10. These collected data on the supply and utilisation of water; the economic cost of water and water related activities; and behavioural attitudes among farmers to water management. Known users of the statistics include Defra and DECC, whilst potential users include

¹¹ <http://www.statisticsauthority.gov.uk/assessment/assessment-reports/assessment-report-72---agricultural-accounts--agricultural-prices-and-farm-business-statistics.pdf>

¹² <http://www.defra.gov.uk/food-farm/land-manage/>

¹³ <http://www.defra.gov.uk/food-farm/farm-manage/training-and-new-entrants/>

researchers with an interest in sustainable countryside management, such as the Centre for Sustainable Water Management¹⁴.

- 2.7 The cost of the FBS in 2009/2010 was estimated to be approximately £2.8 million, the majority of which went to the consortium for data collection purposes. The estimated costs of the individual modules are: *Countryside Maintenance* £63,000; *Management Practices* £64,000; *Energy Use* £100,000; and *Water Usage* £110,000.

¹⁴ http://www.lec.lancs.ac.uk/cswm/cswm_front.php

3 Assessment findings

- 3.1 Defra statisticians engage primarily with colleagues responsible for policy in the areas covered by the reports included in this assessment. Two established user groups – the FBS Advisory Group and the FBS Technical Group – have also discussed the modules. These groups consist of Defra experts, academics and representatives from the contractors who carry out the survey. The FBS team told us that it relies on policy colleagues to maintain contact with and gather feedback from external users although the FBS team also mentioned recent bilateral meetings with external users, such as banks and agricultural colleges. Defra documents the overall uses of statistics from the FBS but has not documented the uses of statistics from these particular modules. As part of the designation as National Statistics, Defra should take steps to develop a greater understanding of the use made of the statistics, including use by non-government users, publish the relevant information and assumptions and use them to better support the use of the statistics¹⁵ (Requirement 1). We suggest that Defra refer to the types of use put forward in the Statistics Authority's Monitoring Brief, *The Use Made of Official Statistics*¹⁶ when documenting use.
- 3.2 The frequency, and the rationale for the frequency, of the modules is not explained on Defra's website nor in the releases themselves. Defra announces the publication dates of all the releases in advance and makes them available on the National Statistics Publication Hub¹⁷. However the FBS team told us that the modules are carried out on an ad hoc basis, rather than to a regular timetable, and that it is not always clear when, or whether, a module will be repeated. Defra does not publish any information about the planning or priority setting for these modules. As part of the designation as National Statistics, Defra should adopt systematic and transparent statistical planning arrangements for the FBS rotating modules¹⁸ (Requirement 2).
- 3.3 On several occasions Defra has published initial findings, followed by more in-depth analysis when resources permit. Some of these analyses are not available on Defra's website due to recent restructuring. The Assessment team suggests that Defra ensure that all its releases and related analytical papers be made accessible from its website.
- 3.4 The FBS methods are well documented and regularly reviewed by independent quality assessors¹⁹. Each release of statistics from the rotating modules includes only a short paragraph about the methods. As part of the designation as National Statistics, Defra should provide details of any methods specific to these modules and link to relevant FBS methods information²⁰ (Requirement 3).
- 3.5 The main FBS release includes web links to equivalent farm business statistics in Wales, Scotland and Northern Ireland. Defra told us that the Welsh

¹⁵ In relation to Principle 1 Practices 1, 2 and 5 of the *Code of Practice*

¹⁶ <http://www.statisticsauthority.gov.uk/assessment/monitoring/monitoring-briefs/monitoring-brief-6-2010---the-use-made-of-official-statistics.pdf>

¹⁷ <http://www.statistics.gov.uk/hub/index.html>

¹⁸ In relation to Principle 1 Practice 3 of the *Code of Practice*

¹⁹ <http://www.defra.gov.uk/statistics/files/defra-stats-foodfarm-farmmanage-fbs-qareport.pdf>

²⁰ In relation to Principle 4 Practice 1 of the *Code of Practice*

Government carries out some of the same modules but that the other countries do not. We suggest that Defra link to any equivalent statistics in other countries.

- 3.6 The more recent releases contain information about sample sizes, response rates and give confidence intervals, as well as a short paragraph on accuracy and reliability. Defra told us that it uses weighting methods to correct for sampling error and non-response. However there is little information for users about the potential errors or biases related to these modules in particular. As part of the designation as National Statistics, Defra should provide more information about quality and reliability of the statistics from these modules²¹ (Requirement 4).
- 3.7 The statistical releases presenting the statistics from the rotating modules all contain key findings, diagrams and tables, and present the statistics in an accessible manner. Defra includes contextual information and some insightful narrative on the results, some of which goes beyond the statistics being presented, which we regard as good practice, as it helps to bring the messages in the statistics to life. Where commentary ranges wider than the statistics presented, Defra should include references to the supporting evidence. Some key terms, such as what is meant by business management skills and the various farm types, such as 'less favoured areas' (LFA) grazing livestock, are inadequately explained. As part of the designation as National Statistics, Defra should improve the commentary in the releases by providing more contextual information about the statistics, references to supporting evidence where appropriate, glossaries of terms, and time series where appropriate²² (Requirement 5). We suggest that in meeting this requirement Defra should consider the points detailed in Annex 2.
- 3.8 The releases are published in PDF format. No tables are currently published in formats which encourage re-use, such as Excel, although Defra told us that it plans to do this. As part of the designation as National Statistics, Defra should publish tables in a format that encourages analysis and re-use²³ (Requirement 6).

²¹ In relation to Principle 8 Practice 1 of the *Code of Practice*

²² In relation to Principle 8 Practice 2 of the *Code of Practice*

²³ In relation to Principle 8 Practice 6 of the *Code of Practice*

Annex 1: Suggestions for improvement

A1.1 This annex includes some suggestions for improvement to the statistics from the FBS rotating modules, 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 | Refer to the types of use put forward in the Statistics Authority's Monitoring Brief, <i>The Use Made of Official Statistics</i> when documenting use (para 3.1). |
| Suggestion 2 | Ensure that all FBS module statistical releases and related analytical papers are accessible (para 3.3). |
| Suggestion 3 | Provide links to any equivalent statistics in other countries of the UK (para 3.5). |
| Suggestion 4 | Consider the points detailed in Annex 2, in seeking to improve the statistical releases (para 3.7). |

Annex 2: Compliance with the Standards for Statistical Releases

- A2.1 In October 2010, the Statistics Authority issued a statement on *Standards for Statistical Releases*²⁴. 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 observation of the Code. In relation to the statistical releases associated with the statistics from the FBS rotating modules, 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 titles of the releases identify the statistics being released and the period to which they relate. The releases all begin with a short introduction outlining the subject matter covered. The releases do not clearly indicate the frequency of the statistics – given the rotating nature of the modules, it would be useful to know if the modules have previously been carried out and when they expect to be carried out again. Most of the releases identify the originating department and provide general contact details. *Energy Use* has no contact details, and *Countryside Maintenance* and *Management Practices* do not give the name of the responsible statistician.

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

- A2.4 All the releases include a summary of key statistics in bullet point format. These are generally a helpful introduction to the statistics although the key figures in *Management Practices* contain some rather vague statements. *Countryside Maintenance* and *Water Usage* contain helpful definitions. *Energy Use* and *Management Practices* would benefit from a definition or glossary section. All the releases provide useful narrative and commentary that explains the statistics in the tables. Commentary in *Management Practice*, *Countryside Maintenance* and *Energy Use* is limited to describing rises and falls and doesn't go further in explaining the reasons for changes. Commentary in *Water Usage* is more comprehensive and helpful, describing for example the impact of recent weather conditions on the use of water.

²⁴ <http://www.statisticsauthority.gov.uk/news/standards-for-statistical-releases.html>

Use language that is impartial, objective and professionally sound

- A2.5 The text used in the releases is generally impartial, objective and evidence-based. Some commentary ranges wider than the statistics being presented, which we regard as good practice in principle. For example, text in *Energy Use* notes that the figures indicate the potential for farms to use energy more efficiently and the impact on the carbon footprint and greenhouse gas emissions. Some text in *Water Usage* relates to a forecast for 2011. Some analysis in *Management Practices* might be interpreted to imply causation between skills in management accounting and level of farm performance. Defra should include references to the supporting evidence for these interpretations.
- A2.6 *Countryside Maintenance* has been produced three times and it would be useful to present some time series information.

Include information about the context and likely uses

- A2.7 *Countryside Maintenance* and *Water Usage* provide some contextual information in the section on the background to the survey, for example mentioning EC legislation (although no link is given to the specific Regulations). *Management Practices* and *Energy Use* do not provide any details of context or the use or potential use made of the statistics. Little information is given as to why these statistics are important, who uses them, or for what purposes. Similarly, there is little information on the quality and reliability of the statistics presented in the releases. *Water Usage* and *Countryside Maintenance* provide some indication of accuracy, with reference to response rates, weighting and standard errors. However the other releases do not mention response rates and other sources of error that might affect the quality of the statistics.

Include, or link to, appropriate metadata

- A2.8 The releases all contain short paragraphs about the underlying survey methodology but none of them link, or direct users to, the comprehensive metadata for the FBS on Defra's website. The releases do not contain any indication of comparability with related statistics or any recent changes to methodology.

Annex 3: Summary of assessment process and users' views

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

A3.2 The Assessment team – Cathy Kruger and Joe Cuddeford – agreed the scope of and timetable for this assessment with representatives of Defra in June. Background information and further evidence were provided on 14 and 24 June. The Assessment team met Defra during June 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 15 responses to its consultation for Assessment Report 72, which covered the main outputs from the FBS. The Assessment team received two further responses from its user consultation for the rotating modules; one from an internal Defra user, and one from an organisation representing the agricultural industry. The Defra user found the reports comprehensive and was very content with the level of engagement with the statistics team. The agricultural organisation found *Management Practices* very useful, as it provided information about the importance of skills and training for farmers. It would like the results to be available sooner, and thought there was potential for the results to be better communicated.

Key documents/links provided

Written Evidence for Assessment document

