

Assessment of compliance with the Code of Practice for Official Statistics

Statistics on Agriculture in Scotland

(produced by the Scottish Government)

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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 produced by the Scottish Government and reported in:

- *Provisional Results from the June Agricultural Census*⁴;
- *Final Results from the June Agricultural Census*⁵;
- *Results from the December Agricultural Survey*⁶;
- *First Estimate of the Cereal and Oilseed Rape Harvest*⁷;
- *Final Estimate of the Cereal and Oilseed Rape Harvest*⁸;
- *Scottish Farm Income Estimates*⁹;
- *Bank Advances to Scottish Agriculture*¹⁰;
- *Economic Report on Scottish Agriculture*¹¹ (ERSA); and
- *Agriculture Facts and Figures*¹².

1.1.2 *ERSA and Agriculture Facts and Figures* are compendium publications. Assessments of compendium publications against the *Code of Practice* relate to the processes involved in preparing the publication, rather than in producing the statistics that are included. Those sets of statistics will normally be subject to separate assessment. Designation of a compendium publication as National Statistics therefore means that the producer body has, for example: identified and met user needs in terms of the content of the publication; considered the appropriateness of each series for inclusion; and written appropriate commentary.

1.1.3 This report is one of four assessing agriculture statistics across the UK. The assessment of Agriculture Statistics for England and the UK, produced by the Department for Environment, Food and Rural Affairs (Defra) has been published in report number 150; 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 has been published in report number 148. Selected agriculture statistics produced by Defra have already been assessed: Assessment report

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.scotland.gov.uk/News/Releases/2010/09/29153433>

⁵ <http://www.scotland.gov.uk/Publications/2010/12/15111305/0>

⁶ <http://www.scotland.gov.uk/Publications/2011/03/09134651/0>

⁷ <http://www.scotland.gov.uk/Publications/2010/10/04092600/0>

⁸ <http://www.scotland.gov.uk/Publications/2010/12/17150639/0>

⁹ <http://www.scotland.gov.uk/Publications/2011/01/27082045/0>

¹⁰ <http://www.scotland.gov.uk/Publications/2010/08/bankadv2010/Q/forceupdate/on>

¹¹ <http://www.scotland.gov.uk/Publications/2011/06/15143401/0>

¹² <http://www.scotland.gov.uk/Publications/2011/06/09104215/0>

22¹³ discussed *Agriculture in the UK* and selected crop and livestock statistics; and Assessment report 72¹⁴ discussed statistics on agricultural accounts and agricultural prices, as well as farm business statistics.

- 1.1.4 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 listed in section 1.1.1 are designated as National Statistics, subject to the Scottish Government implementing the enhancements listed in section 1.5 and reporting them to the Authority by March 2012.

1.3 Summary of strengths and weaknesses

- 1.3.1 The Scottish Government engages with government users regularly, and with non-government users through the ScotStat Agriculture Committee¹⁵ and meetings with expert users. Engagement with ScotStat is well documented and non-committee members are sent regular updates. Scottish Government has not consulted users about agriculture statistics through a formal public consultation process since 2006.
- 1.3.2 The Scottish Government provides good analyses of revisions and the impact that changes to methods or classifications have had on the statistics. Announcements of forthcoming changes are currently provided on the Scottish Government's ScotStat website and to colleagues developing agriculture policy in meetings, but not on the Scottish Government's agricultural statistics webpages.
- 1.3.3 The Scottish Government has reduced the burden on data suppliers through the use of administrative data from the Single Application Form¹⁶ (SAF). There is potential to reduce the burden further through the use of administrative data from the Cattle Tracing Scheme¹⁷ (CTS) and other administrative data sources.
- 1.3.4 The Scottish Government has recently improved some of its agriculture statistics outputs and the commentary in most of the releases provides very good contextual information that aids analysis and interpretation of the statistics. Some publications have ceased, with the statistics now included in

¹³ See footnote 1

¹⁴ See footnote 1

¹⁵ <http://www.scotland.gov.uk/Topics/Statistics/Browse/Agriculture-Fisheries/scotstat/comms>

¹⁶ The Single Application Form is used by farmers to apply for support or subsidies. For further information, see <http://www.scotland.gov.uk/Topics/farmingrural/Agriculture/grants/Schemes> and <http://www.scotland.gov.uk/Resource/Doc/278281/0094719.pdf>

¹⁷ <https://secure.services.defra.gov.uk/wps/portal/ctso>

the improved compendium publication *ERSA*. The information provided about some methods is rather brief.

1.4 Detailed recommendations

1.4.1 The Assessment team identified some areas where it felt that the Scottish Government 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	Announce planned changes to methods or classifications more prominently (para 3.7).
Requirement 2	Publish full details about the methods used to compile farm income estimates, statistics on bank advances and cereal and oilseed rape harvest statistics, including explanations of why particular methods are used (para 3.13).
Requirement 3	Publish information about the quality of agriculture statistics, including the main sources of bias and other error (para 3.14).
Requirement 4	Publish an explanation of the quality assurance procedures involving industry experts, including an explanation of why this process is used (para 3.15).
Requirement 5	Report annually the estimated costs of responding to its agricultural surveys (para 3.22).
Requirement 6	Improve the commentary in <i>Facts and Figures</i> and <i>Bank Advances to Scottish Agriculture</i> and provide more contextual information about the statistics (para 3.29).
Requirement 7	Include the name and contact details of the responsible statistician in all agriculture statistics publications (para 3.32).
Requirement 8	Publish plans for investigations into the use of Cattle Tracing System data (para 3.37).

2 Subject of the assessment

2.1 The statistics included in this assessment cover various aspects of agriculture in Scotland:

- *Results from the June Agricultural Census (provisional and final)* present statistics from the Scottish Government's annual agricultural census¹⁸ of land use, crop areas, livestock and the number of people working on agricultural holdings. For the 2010 census, the Scottish Government sent questionnaires to around 35,000 farms and received around 23,000 completed forms – a response rate of around 67 per cent. The Scottish Government collects the data to comply with EU regulations¹⁹. The publication contains trend data for the previous 10 years. *Final Results from the June Agricultural Census* is published after the statistics are fully validated and presents additional statistics which were not included in the Provisional release. From 2011 the Scottish Government plans to publish only a final release, in September each year.
- *Results from the December Agricultural Survey* is published annually and presents annual statistics on winter sown crops, livestock, labour, machinery and hay and silage production. It was published as a statistical publication for the first time in 2010; previously only data tables and a Statistical News Release focusing on key annual trends were published. For the 2010 survey, the Scottish Government sent forms to around 15,000 farms (of over one hectare in size) and received around 11,000 completed forms – a response rate of around 73 per cent. The survey is covered by the same regulatory requirement as that for the June Agricultural Census. The publication contains trend data for the previous 10 years.
- *First Estimate of the Cereal and Oilseed Rape Harvest* is published annually and presents first estimates of the harvest based on provisional area results from the June Agricultural Census along with crop yield estimates provided by Agricultural Officers from the Scottish Government's Area Offices. The Scottish Government discusses and agrees these first estimates at an annual meeting with industry experts including representatives from the National Farmers Union (NFU), the Scottish Agriculture College and the private sector. These statistics are legally required by Eurostat and are published in October each year to meet an EU deadline.
- *Final Estimate of the Cereal and Oilseed Rape Harvest* is published in December each year and presents an update on the first estimates. The publication presents a comparison of first and final results. The final production estimates are based mainly on the final yield results from the Cereal Production Survey (CPS) – a sample of around 400 farms in Scotland – and final crop areas from the June Agricultural Census. Some

¹⁸ 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.

¹⁹ EU regulation 1165/2008 (cattle, pigs and sheep) <http://www.europe.org.uk/europa/view/-/id/1386/> ; EU regulation 543/2009 (crops and land) <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009R0543:EN:NOT>

production estimates are based on a combination of survey results and yield estimates agreed at the annual meeting with industry experts.

- *Scottish Farm Income Estimates* presents statistics on two farm income measures: Total Income From Farming (TIFF) and Farm Business Income (FBI). The two measures are closely related and provide complementary information. TIFF provides a national estimate of total income across all agricultural holdings, with a breakdown of the national value of farm outputs, costs and subsidies. The Scottish Government uses multiple data sources to compile TIFF statistics, including: the June Agriculture Census; December Agriculture Survey; the FAS; and prices and volumes data from industry-specific market reports and surveys run by agriculture organisations. FBI provides information about the incomes of farm businesses for eight different farm types, with estimates of average incomes, outputs, costs and subsidies. FBI estimates come from the Farm Accounts Survey (FAS) for Scotland, which is based on a sample of around 500 farms in Scotland. The survey only includes farms above a certain size (over 0.5 Standard Labour Requirements²⁰) and covers most main farm types in Scotland, excluding horticulture, specialist pig and specialist poultry producers. The survey is carried out by the Scottish Agricultural College²¹ on behalf of the Scottish Government.
- *Bank Advances to Scottish Agriculture* presents statistics annually on borrowing by farms based on information collected from banks and mortgage companies in Scotland. The 2010 publication presents results since 1980, including year-on-year changes and annual bank advances by sector (farmers, agricultural contractors and livestock salesmen).
- *Economic Report on Scottish Agriculture (ERSA)* is an annual compendium publication which presents an overall picture of Scottish agriculture using data from the various agricultural surveys which the Scottish Government manages. The report presents detailed analyses of TIFF, the FAS and the June Agricultural Census to complement the topic-specific publications. Following a review of its agriculture statistics publications in 2010, the Scottish Government redesigned *ERSA* to include more commentary and incorporate information from related publications which the Scottish Government no longer produces.
- *Agriculture Facts and Figures* is an annual compendium 'pocketbook' publication which provides an overview of some key Scottish agriculture statistics including the total value of agricultural output, livestock numbers, labour force, and land use by type of crop.

2.2 The Scottish Government's agriculture statistics are used for various purposes, including:

- by the Scottish Government to develop, monitor and evaluate agriculture policy – for example, to inform the work of a recent inquiry²² into future agriculture support for Scotland;

²⁰ Standard Labour Requirements (SLR) represent the approximate average labour requirement for a livestock or crop enterprise. One SLR equates to 1,900 hours per year.

²¹ <http://www.sac.ac.uk/>

²² <http://www.scotland.gov.uk/Topics/farmingrural/Agriculture/inquiry>

- by the Scottish Government and the financial sector to assess the economic performance of the various agricultural sectors;
- by Defra to compile UK-wide statistics to meet UK government policies and EU regulations;
- by farmers and farming advisers to inform their planning for the coming year;
- by research organisations, such as the James Hutton Institute²³, to underpin their research programmes and projects;
- by disease and epidemiology modellers to assist their emergency planning procedures for animal disease outbreaks;
- by environmental protection organisations, such as the Scottish Environment Protection Agency, to monitor livestock numbers and land use near river catchment areas; and
- by agriculture journalists to inform relevant press articles.

2.3 The Scottish Government informed us that the estimated cost of producing and publishing these statistics in 2010/11 was around £1.45 million; specifically of which the cost of the farm income statistics and compendiums was around £1 million, including £764,000 for the FAS and the June Agricultural Census cost around £315,000.

²³ <http://www.hutton.ac.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 Scottish Government's agriculture statisticians regularly engage with their colleagues developing policy to: provide advice on the use of the statistics; identify any major gaps in the statistics; and discuss changes to the data collection to reflect changes in user needs. Statisticians also hold briefings with policy colleagues ahead of each publication – within the 5 day pre-release period – primarily to discuss the implications of the statistics on Scottish Government policies as well as taking the opportunity to seek views on the format and content of the publications. In January each year, the statisticians hold a briefing for agriculture journalists to explain the farm income statistics and to answer queries about the methods they use.
- 3.2 The Scottish Government engages with non-government users via the ScotStat Agriculture Committee which meets annually. The committee members include academics, researchers, and representatives from the NFU, the meat industry, the financial sector and environmental groups. The Scottish Government has published the committee's membership and remit on the ScotStat area of its website, as well as the papers and minutes of committee meetings.
- 3.3 The Scottish Government publishes information about uses of agriculture statistics in various publications. The guidance which the Scottish Government sends to all farmers sampled in the June Agricultural Census also includes information about the uses of the data and results.
- 3.4 In 2006 the Scottish Government consulted users²⁴ about proposed changes to farm income statistical indicators. It published the consultation responses, a summary of users' views and its response to these views and included the consultation outcomes in its various agriculture statistics publications. As the Scottish Government has not carried out any similar formal public consultations since 2006, we suggest that it consider the current approach to user engagement to ensure that all potential users are consulted.
- 3.5 The Scottish Government's timetables for producing and publishing its agriculture statistics are heavily influenced by EU statistical regulations and Defra's timetables for publishing UK statistics. These regulations impact in particular upon the timetable for producing *First Estimate of the Cereal and Oilseed Rape Harvest* (see paragraph 3.13). The Scottish Government recently improved its production processes which allowed it to bring forward the publication of final June Agricultural Census statistics from October to September, meaning there is now no need to produce provisional results. Users welcomed this development, and the Scottish Government plans to publish only final results in future.

²⁴ <http://www.scotland.gov.uk/Topics/Statistics/Browse/Agriculture-Fisheries/scotstat/othercons>

3.6 In July 2009 the Scottish Government published its *Agriculture Statistics Plan*²⁵ which provided details about its activities and planned developments for agriculture statistics for 2009/10 and beyond. The plan also identifies its priorities for agriculture statistics and available resources. We suggest that the Scottish Government update its *Agriculture Statistics Plan* to reflect recent developments.

²⁵ <http://www.scotland.gov.uk/Topics/Statistics/Browse/Agriculture-Fisheries/scotstat/Agstat0910>

Principle 2: Impartiality and objectivity

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

- 3.7 The Scottish Government has announced changes to methods and classifications in advance of publishing changed agriculture statistics. For its 2006 consultation on measures of farm income, the Scottish Government published a paper²⁶ which included a description of proposed changes to methods and classifications. Announcements to changes are made through the ScotStat network and information is provided on the ScotStat webpages of the Scottish Government's website. However, there is scope for the Scottish Government to inform the wider user community about such changes – for example, by publishing relevant details on its agricultural statistics webpage. As part of the designation as National Statistics, the Scottish Government should announce planned changes to methods or classifications more prominently²⁷ (Requirement 1).
- 3.8 The Scottish Government has published a revisions and corrections policy²⁸ on its website and has published comprehensive information to explain the impact of revisions or changes in methods to users. Following changes resulting from the 2006 consultation on farm Income measures, the Scottish Government published a report²⁹ which described in detail how the new results compared with the corresponding results using the previous measure. For the 2009 Agriculture Census, the Scottish Government announced in a statistical news release³⁰ the impact of using Land Use data from the Single Application Form (SAF) on the Census results and included the change in data source in the labelling for the tables and graphs in *Final Results from 2010 June Agriculture Census*. For Agriculture Census statistics, the Scottish Government also published details³¹ of revisions to historic data, including: revisions to 2003 to 2005 data resulting from a change in methods in 2006; and revisions to 2008 and 2009 results, made in 2010.
- 3.9 The Scottish Government routinely revises its farm income statistics as more up-to-date data become available. It publishes revisions³² to previously published farm income statistics alongside the latest publication.
- 3.10 The Scottish Government's Revisions and Corrections Policy details the actions it would take to correct errors and announce the corrections. The Scottish Government has not found any major errors in any of the statistics included in this assessment.

²⁶ <http://www.scotland.gov.uk/Resource/Doc/933/0041874.pdf>

²⁷ In relation to Principle 2, Practice 4 of the *Code of Practice*

²⁸ <http://www.scotland.gov.uk/Topics/Statistics/About/CPsonRevisionsCorrections/Q/EditMode/on/ForceUpdate/on>

²⁹ <http://www.scotland.gov.uk/Publications/2009/08/26130432/0>

³⁰ <http://www.scotland.gov.uk/News/Releases/2009/09/22164157>

³¹ <http://www.scotland.gov.uk/Topics/Statistics/Browse/Agriculture-Fisheries/revisions>

³² See footnote 9

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.

- 3.11 No incidents of political pressures, abuses of trust or complaints relating to professional integrity, quality or standards were reported to or identified by the Assessment team. We were told that the Scottish Government's Chief Statistician has sole responsibility for producing and publishing the statistics.
- 3.12 In addition to holding annual briefings with agriculture journalists to discuss farm income statistics, Scottish Government statisticians also discuss media queries directly with members of the press. The Scottish Government has provided seminars for its statisticians on dealing with the media.

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.

- 3.13 The Scottish Government publishes information about data sources and some details about the methods it uses to compile its agriculture statistics. For example, *Results from the December Agricultural Survey* contains information about how the Scottish Government produces estimates for non-responses to the survey. However, there is scope to publish more information about methods used to produce their other statistics. More detailed information about the FAS could be provided in *Scottish Farm Income Estimates* and, in particular, the methods used to produce the provisional estimates of the cereal and oilseed rape harvest need to be clearly described. This is because the statistics published in *First Estimate of the Cereal and Oilseed Rape Harvest* are produced as a result of discussions between Scottish Government agriculture staff and representatives of trade organisations at the Crop Report Meeting held by Scottish Government each September. Initial estimates are provided by Scottish Government staff, industry bodies and the NFU based on data collected from farmers through various surveys. The estimates are produced in this way because the harvest in Scotland is too late for a survey to be run to produce estimates to meet the EU's deadline³³. Final estimates are based on the Cereal Production Survey (CPS), supplemented with provisional estimates where the survey coverage is insufficient. The Scottish Government provides an analysis of the differences between the first and final estimates in the final estimates report. These show that the overall first estimate is generally within 5% of the overall final estimate. As part of the designation as National Statistics, the Scottish Government should publish full details about the methods used to compile farm income estimates, statistics on bank advances and cereal and oilseed rape harvest statistics, including explanations of why particular methods are used³⁴ (Requirement 2).
- 3.14 The Scottish Government has published a policy about quality³⁵ which sets out how it will meet users' expectations for various aspects of quality. The agriculture statistics publications contain some information about quality such as the coverage and response rates for agricultural surveys. However, there is scope to include more details about quality such as confidence intervals and potential sources of bias. As part of the designation as National Statistics, the Scottish Government should publish information about the quality of agriculture statistics, including the main sources of bias and other error³⁶ (Requirement 3).
- 3.15 The Scottish Government publishes summary information about the procedures it uses to assure the quality of the statistics derived from the June Agricultural Census, the December Agricultural Survey and the CPS. The Scottish

³³ Article 7, Para 3: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31990R0837:EN:HTML>

³⁴ In relation to Principle 4, Practice 1 of the *Code of Practice*

³⁵ <http://www.scotland.gov.uk/Topics/Statistics/About/QualityCPS/Q/EditMode/on/ForceUpdate/on>

³⁶ In relation to Principle 4, Practice 2 of the *Code of Practice*

Agricultural College carries out various validation checks as part of its contract to conduct the FAS. The Scottish Government carries out further checks upon receiving these data and discusses any anomalies with the contractor. The Scottish Government assures the quality of TIFF results and components with industry experts, including the NFU and Scottish Agricultural Bankers. As part of the designation as National Statistics, Scottish Government should publish an explanation of the quality assurance procedures involving industry experts, including an explanation of why this process is used³⁷ (Requirement 4).

- 3.16 The Scottish Government produces its agriculture statistics largely to comply with relevant EC regulations for agriculture statistics, which stipulate what statistics should be produced and when. This common framework means that Scottish agriculture statistics are broadly comparable with those produced by the other UK countries and EU regions. The Scottish Government publishes some comparisons with the other UK countries in *ERSA* and *Agriculture Facts and Figures* and includes links or signposting in its publications to Defra's website (for UK statistics) and relevant EU regulations. The Scottish Government's agriculture statisticians have regular discussions with their counterparts from the other UK countries about methods and definitions.

³⁷ In relation to Principle 4, Practices 1 and 4, and Principle 3, Practice 3 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.

- 3.17 The Scottish Government has published a confidentiality statement³⁸. Respondents to the various agriculture surveys are informed about how their confidentiality will be protected, in letters requesting their participation and on the data collection forms. For the FAS, the Scottish Government informs farmers that the survey contractor, Scottish Agriculture College sends only non-disclosive information to the Scottish Government. The contract does not allow unauthorised disclosure of survey data, including names and addresses of respondents, and the Scottish Agriculture College may only use farmers' addresses supplied to them by the Scottish Government for recruiting survey participants.
- 3.18 The Scottish Government collects June Agriculture Census data and December Agriculture Survey data under the *Agriculture Act 1947*³⁹ which includes provisions for protecting confidentiality and restrictions on the use of respondents' data. The Act allows the Scottish Government to supply disclosive data under certain circumstances, such as to the Food Standards Agency. The Scottish Government's authorisation from the Chief Statistician is provided in the Scottish Government's confidentiality statement⁴⁰.
- 3.19 The Scottish Government provides restricted access to the data it collects via its agriculture surveys to promote and maximise the use of the data for research and statistical purposes. In each case, the Scottish Government releases the data only once the recipient has signed a confidentiality agreement. These agreements previously required recipients of data from the June Agriculture Census and December Agriculture Survey to destroy all confidential data on completion of their research. However, this was an inefficient approach for both regular data users and the Scottish Government as it had to re-supply the same data for future projects. The Scottish Government changed its procedure to allow several research organisations to keep these data for future projects under the conditions of time-limited agreements. A separate confidentiality agreement is still signed for each individual research project.
- 3.20 For the FAS, confidentiality agreements require the recipient to confirm destruction of the data once the research has been completed. The Scottish Government has provided data from the CPS to inform research projects; for example, it supplied anonymised records for a project investigating the relationship between local climates and crop yields.
- 3.21 The Scottish Government does not publish any agriculture statistics that are based on fewer than 5 holdings or businesses, or where 85 per cent (80 per cent for the FAS) or more of the value is attributable to fewer than three

³⁸ <http://www.scotland.gov.uk/Topics/Statistics/About/CPSconfidentiality/Q/EditMode/on/ForceUpdate/on>

³⁹ <http://www.legislation.gov.uk/ukpga/Geo6/10-11/48/contents>

⁴⁰ <http://www.scotland.gov.uk/Topics/Statistics/About/CPSconfidentiality/Q/EditMode/on/ForceUpdate/on>

holdings or businesses. The Scottish Government does not release data from surveys which only involve a small sample of producers.

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.

- 3.22 A supplier who contacted us in response to this assessment highlighted the burden imposed on farmers sampled for the FAS. As part of the designation as National Statistics, the Scottish Government should report annually the estimated costs of responding to its agricultural surveys⁴¹ (Requirement 5).
- 3.23 Since 2009 the Scottish Government has used Land Use data from an administrative source – the SAF⁴² – to compile part of *Final Results from the June Agricultural Census*. This reduced the burden on respondents to the agricultural census. The Scottish Government told us that it plans to investigate other administrative data sources – for example, data from the Cattle Tracing System⁴³ (CTS) and the Sheep and Goat Annual Inventory⁴⁴ – to further minimise the burden on data suppliers (see paragraph 3.36).
- 3.24 The Scottish Government provided examples of cases in which, following proposals from Defra and the EC to collect additional data from its agriculture surveys, it had identified existing alternative data sources (supplemented by the views of industry experts) to provide the required information. Using these alternative sources prevented any increases in the burden placed on farmers.

⁴¹ In relation to Principle 6, Practice 1 of the *Code of Practice*

⁴² See footnote 16

⁴³ See footnote 17

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.

- 3.25 Within the Scottish Government, a team of 6 full-time statisticians produces its agriculture statistics, supported by 13 specialised administrative staff. The Scottish Government told us that it has sufficient resources to produce the statistics to a standard which meets the *Code*.
- 3.26 In 2010 the Scottish Government reviewed the work of its Agriculture Statistics Unit and the unit's priorities for 2010/11 and beyond. The review considered various criteria, including policy priority, feasibility, stakeholder interest, EU requirements and funding, and value for money. The Scottish Government published the review document⁴⁵ on its website and discussed the unit's priorities with the ScotStat Agriculture Committee⁴⁶. The Scottish Government has since revised the format and content of its agriculture statistics publications which has reduced duplication and enhanced coherence. Some users of the statistics expressed concerns about the Scottish Government's proposals to reduce sample sizes in its agriculture surveys, including the June Agriculture Census and December Agriculture Survey. The Scottish Government told us that it will review value for money issues in the light of these users' responses.

⁴⁵ <http://www.scotland.gov.uk/Topics/Statistics/Browse/Agriculture-Fisheries/scotstat/asuwp2011>

⁴⁶ <http://www.scotland.gov.uk/Topics/Statistics/Browse/Agriculture-Fisheries/scotstat/AGmin2010>

Principle 8: Frankness and accessibility

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

- 3.27 The Scottish Government seeks to maximise the value of its agriculture statistics publications by including a high level of detail and analysis in the reports. It also provides data tables on its website pages to allow users to analyse and re-use the data, and it told us that it responds to stakeholder requests for additional analyses of the statistics.
- 3.28 As part of the 2010 review of its Agriculture Statistics Unit, the Scottish Government consulted stakeholders about the detail and format of its statistics publications and subsequently made substantial changes to its outputs. The Scottish Government reduced the level of duplication between the publications, and improved the layout and content of the publications by including more background information, better graphics and more helpful and insightful commentary.
- 3.29 *Scottish Farm Income Estimates, Final Estimate of the Cereal and Oilseed Rape Harvest* and the statistics publications which are derived from the June Agriculture Census and the December Agriculture Survey follow a similar format. The publications are clearly laid out and accessible, include introductions and main findings, and provide useful commentary which is designed to help users understand the statistics. For example, *Provisional Results from the 2010 June Agricultural Census* provides very good commentary including an explanation of the sowing conditions to aid the analysis of the trends in cereal areas. However, the *Facts and Figures* pocket book does not provide any commentary and the commentary in *Bank Advances to Scottish Agriculture* provides only a summary of the main findings without any discussion or analysis. There is scope to improve aspects of the publications to aid users' interpretation of the statistics – for example, by including definitions of technical terms, providing more information about the policy context of the statistics, and ensuring that all publications include helpful commentary. As part of the designation as National Statistics, the Scottish Government should improve the commentary in *Facts and Figures* and *Bank Advances to Scottish Agriculture* and provide more contextual information about the statistics⁴⁷ (Requirement 6). We suggest that Scottish Government consider the points detailed in annex 2.

⁴⁷ In relation to Principle 8, Practice 2 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.

3.30 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.

- 3.31 The Scottish Government provided the Assessment team with copies of internal timetables for the production and publication of its agriculture statistics. There have been no delays in the production or publication of any agriculture statistics releases. The Scottish Government announces⁴⁸ the publication month of all of its agriculture statistics 12 months in advance on its website.
- 3.32 The releases presenting statistics from the June Census and December Surveys and *Bank Advances to Scottish Agriculture* provide contact information including the statistical team's email address but do not have the name of the responsible statistician on them. The 2010 publication of *Facts and Figures* has the name of the responsible statistician but the 2011 publication does not. As part of the designation as National Statistics, the Scottish Government should include the name and contact details of the responsible statistician in all agriculture statistics publications⁴⁹ (Requirement 7).
- 3.33 The Scottish Government provides pre-release access to *Final Estimate of the Cereal and Oilseed Rape Harvest* to around 20 individuals and pre-release access to between 30 and 40 individuals for its other agriculture statistics. We suggest that the Scottish Government publish records of those granted pre-release access to agriculture statistics in their final form. We also suggest that the Scottish Government review the composition of pre-release access lists to ensure that they are minimised as much as possible.
- 3.34 The Scottish Government meets with external stakeholders to discuss the statistics presented in *First Estimate of Cereal and Oilseed Rape* and *Scottish Farm Income Estimates* under strict confidentiality conditions. These stakeholders are not provided with pre-release access to statistics in their final form.

⁴⁸ <http://www.scotland.gov.uk/Topics/Statistics/Search/Forthcoming>

⁴⁹ 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.

- 3.35 The Scottish Government has published a Statement of Administrative Sources⁵⁰ which includes various data sources used to compile its agriculture statistics.
- 3.36 Before using the SAF as a source of Land Use data for the June Agricultural Census, the Scottish Government commissioned the Macaulay Institute and the Scottish Agricultural College to assess the suitability of these data for this statistical purpose. The Scottish Government subsequently published a report⁵¹ on the quality and reliability of the data. This research helped the Scottish Government to identify the strengths and weaknesses of SAF data for statistical purposes. It also informed a stakeholder consultation and the proposals for the SAF system which the Scottish Government subsequently implemented.
- 3.37 The Scottish Government told us that it plans to investigate replacing data from the June Census with administrative data from the CTS. Data from the CTS are already used by Defra and the Welsh Government in place of survey data from the June Census for England and Wales respectively; the Department of Agriculture and Rural Development in Northern Ireland uses data from a comparable source, the Animal and Public Health Information System. The quality of the data for the UK available from these systems has been thoroughly investigated⁵² by Defra and its use is accepted by the EU. As such we feel there is no reason why Scottish Government could not be using the data from CTS already. As part of the designation as National Statistics, Scottish Government should publish plans for investigations into the use of Scottish CTS data⁵³ (Requirement 8).

⁵⁰ <http://www.scotland.gov.uk/Topics/Statistics/About/StatementAdminSources/Q/EditMode/on/ForceUpdate/on>

⁵¹ <http://www.scotland.gov.uk/Publications/2008/08/06104732/14>

⁵² <http://www.defra.gov.uk/statistics/files/defra-stats-foodfarm-landuselivestock-june-results-BovineRegisters.pdf>

⁵³ In relation to Protocol 3, Practice 3 of the *Code of Practice*

Annex 1: Suggestions for improvement

A1.1 This annex includes some suggestions for improvement to the Scottish Government'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.

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|---------------------|---|
| Suggestion 1 | Consider the current approach to user engagement to ensure that all potential users are consulted (para 3.4). |
| Suggestion 2 | Update its <i>Agriculture Statistics Plan</i> to reflect recent developments (para 3.6). |
| Suggestion 3 | Consider the points detailed in annex 2, in seeking to improve the statistical releases (para 3.29). |
| Suggestion 4 | Publish records of those granted pre-release access to agriculture statistics in their final form (para 3.33). |
| Suggestion 5 | Review the composition of pre-release access lists to ensure that they are minimised as much as possible (para 3.33). |

Annex 2: Compliance with Standards for Statistical Releases

- A2.1 In October 2010, the Statistics Authority issued a statement on *Standards for Statistical Releases*⁵⁴. 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 titles of the releases presenting statistics from the June Agricultural Census and December Agricultural Surveys do not tell the reader what the statistics are about, only where they are from. Furthermore, these releases, along with both *Estimate of the Cereal and Oilseed Rape Harvest* releases and *Agriculture Facts and Figures* do not specify that the statistics relate only to Scotland.
- A2.4 The frequency of the releases is implied within the releases; the webpage from which the releases are downloaded clearly states the frequency of publication. The provisional releases provide the month in which the final estimates will be published.
- A2.5 All standard headings and logos are used appropriately.
- A2.6 The releases presenting statistics from the June Census and December Surveys and *Bank Advances to Scottish Agriculture* provide general contact information including the statistical team's email address but do not have the name of the responsible statistician on them. The 2010 publication of *Facts and Figures* has the name of the responsible statistician but the 2011 publication does not.
- A2.7 Each release, except *Facts and Figures* provides a paragraph giving a brief explanation of the statistics presented as well as a contents page identifying topics covered and tables of data. Although *Facts and Figures* is a quick reference pocket book a contents page would still be helpful.
- A2.8 Latest statistics and revisions are clearly identified within the releases. Unscheduled revisions, such as those presented in *Provisional Results from the 2010 June Agricultural Census* are clearly identified and an explanation of the reason for the revision is provided.

⁵⁴ <http://www.statisticsauthority.gov.uk/news/standards-for-statistical-releases.html>

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

- A2.9 All releases except *ERSA* present the main findings as bullet points at the start of the release. *ERSA* is a compendium publication and directs readers to the individual releases for headline results.
- A2.10 The language used is generally straightforward; however there are some technical agricultural terms which may not be understood by a lay-person. For example, there is no definition provided of 'less-favoured areas' or any explanation of what 'LFASS' payments are. The commentary in *Final Estimate of the Cereal and Oilseed Rape Harvest 2010* discusses 'yield' and 'production' without providing an explanation of the terms and how they differ.
- A2.11 The commentary in most of the releases provides very good contextual information that aids analysis and interpretation of the statistics. For example, in *Provisional Results from the 2010 June Agricultural Census*, an explanation of the sowing conditions is provided to aid the analysis of the trends in cereal areas. *Facts and Figures* does not provide any commentary, and *Bank Advances to Scottish Agriculture* provides the main findings as bullet points. More information in both *Estimate of the Cereal and Oilseed Rape Harvest* releases about potential reasons for the diverging trends in yields and area used would be helpful. Commentary in *Scottish Farm Income Estimates 2010* seems to be contradictory (Section 3.6 and paragraph 6 in section 4.2) but could be due to slightly different time periods being used for TIFF and FBI; this needs clarification. Graphs and charts are provided; however, the stacked block graphs make visual comparisons difficult, and some charts (e.g. Chart 5 in *Final Estimate of Cereals and Oilseed Rape Harvest 2010*) are missing labels.

Use language that is impartial, objective and professionally sound

- A2.12 The text used in all releases is impartial and does not endorse or criticise government policy. Although no commentary is provided in *Facts and Figures*, a list of publications where further information can be found is provided.
- A2.13 Descriptive statements are consistent with the statistics.
- A2.14 The descriptions of the proportions and trends are professionally sound. Discussion of sampling and non-sampling variability is provided in the 'Notes' section of *Provisional Results from the 2010 June Agricultural Census*, However, no confidence intervals or other quality measures are provided with the estimates.

Include information about the context and likely uses

- A2.15 All releases except *Facts and Figures* provide information about the operational context and EU regulations under which the data are collected. Links are provided to further information about the regulations.

A2.16 Each release except *ERSA* and *Facts and Figures* has a section describing the uses to which the statistics are put. Links are provided to organisations which use the statistics and also in *Scottish Farm Income Estimates* to research articles where the statistics have been used. However, there is no discussion about the quality and reliability of the statistics in relation to those uses.

Include, or link to, appropriate metadata

A2.17 All releases except *Facts and Figures* provide some information about the methods used to collect and aggregate the statistics. For some releases, most notably both *Estimate of Cereals and Oilseed Rape Harvest* releases, more detailed information could usefully be provided. *ERSA* provides links to the individual releases where the methodology information is published.

A2.18 All releases provide links to UK-level data. UK-level statistics from the June census are provided for comparison purposes in *ERSA*, and in *Facts and Figures* some tables present statistics for UK countries and for the EU. *Bank Advances to Scottish Agriculture* provides links to and brief analysis of other statistics relating to farm finances, including data for the UK from the Bank of England.

A2.19 The introduction of administrative data on land use from the SAF into the June Census is clearly indicated and analysed in *Results from the 2010 June Agricultural Census*. Graphs illustrating the time series are marked to indicate the introduction of the new data source and a note is provided to explain that the changes from 2008 to 2009 do not represent genuine changes in land use.

A2.20 Currently, statistics which are subject to scheduled revisions are published in two releases marked 'provisional' or 'first' and 'final'. *Final Estimate of Cereals and Oilseed Rape Harvest* provides a comparison of the provisional and final results and the *Final Results from the 2010 June Agricultural Census* provides a brief summary and a link to a table of comparisons.

Annex 3: Summary of assessment process and users' views

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

A3.2 The Assessment team – Phil Grigor and Rachel Beardsmore – agreed the scope of and timetable for this assessment with representatives of the Scottish Government in May. The Written Evidence for Assessment was provided on 21 June. The Assessment team subsequently met the Scottish Government 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 13 responses from the user consultation. The respondents were grouped as follows:

Scottish Government	4
Other government	3
Academic	2
Research consultant	2
Other	2

A3.5 Users were generally satisfied with the level, quality, presentation and accessibility of the statistics which, overall, meet their needs. Two users mentioned that various aspects of the statistics had improved in the last 2 years. Users were satisfied with the accessibility and helpfulness of the producer team (although there was a suggestion that the Scottish Government staff turnover may have impaired recent communication). Suggestions for improvement included: availability of information at a lower geographic level; adding standardised geographical identifiers; providing robust linkages between census codes and other identifiers; providing more information about methods used; and consulting more on methods, plans and priorities. Some users mentioned that (some) data tables were either not available or were difficult to find on SG's website, and one user indicated that the methods which the Scottish Government uses are not clear and that some UK-wide aspects could be better harmonised.

A3.5 Scottish Agricultural College respondents reported some difficulties with the FAS, such as securing farmers' participation, the complexity (and time burden) of the survey, and problems providing reliable data and supporting information.

The Scottish Government is apparently aware of these issues, and appears to understand what is involved in providing the data. Suppliers are largely aware of what the Scottish Government uses the data for, and reported positive relationships with the Scottish Government producer team. However, suppliers had differing views about whether the Scottish Government consulted them adequately about data requirements.

Key documents/links provided

Written Evidence for Assessment document

