Distribution of Sheep in UK on 02 June 2005

Version 1

27 October 2006

Produced by: Surveillance, Zoonoses and Emerging Issues Division (SZEID), Department for the Environment, Food and Rural Affairs (Defra)

On behalf of: Veterinary Surveillance Strategy
www.defra.gov.uk/animalh/diseases/veterinary

Enquiries to: SZEID, Defra
Areas 601, 1A Page Street, London, SW1P 4PQ
Telephone: 0207 9048333
E-mail: vetsurveillance@defra.gsi.gov.uk
Report Metadata

<table>
<thead>
<tr>
<th>Creator</th>
<th>SZEID, Defra Area 601, 1A Page St, London, SW1P 4PQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date. created</td>
<td>2006-10-27</td>
</tr>
<tr>
<td>Identifier</td>
<td>RP6150</td>
</tr>
<tr>
<td>Quality</td>
<td>See section 3 for details</td>
</tr>
<tr>
<td>Publisher</td>
<td>SZEID, Defra Area 601, 1A Page St, London, SW1P 4PQ</td>
</tr>
<tr>
<td>Source</td>
<td>June Agricultural and Horticultural Census 2005</td>
</tr>
<tr>
<td>Title</td>
<td>Distribution of Sheep in UK on 02 June 2005</td>
</tr>
</tbody>
</table>

N.B. Additional metadata about this report is listed in Appendix A.

Copyright Information

RADAR reports are protected by Crown copyright. You may download RADAR reports to file or printer for non-commercial research and private study. For any other form of re-use you will need a click-use licence for core material from the Office of Public Sector Information (OPSI). Click-use licences can be downloaded from the OPSI website at:

http://www.opsi.gov.uk/click-use/index.htm

If you have any queries please contact:
Office of Public Sector Information
Information Policy Team
St Clements House
2-16 Colegate
Norwich
NR3 1BQ
Fax: +44 (0)1603 723000
Email: hmsolicensing@cabinet-office.x.gsi.gov.uk

For further information on Crown copyright policy and licensing arrangements see the guidance featured on the OPSI website at:
http://www.opsi.gov.uk/advice/crown-copyright/index.htm

Where applicable, permission must be obtained from Ordnance Survey prior to the re-use of RADAR maps for purposes other than private study and non-commercial research. Information about Ordnance Survey copyright can be contacted at:
http://www.ordnancesurvey.co.uk/oswebsite/business/copyright/

Where we have identified any third party copyright material you will need to obtain permission from the copyright holders concerned.
# CONTENTS

1 EXECUTIVE SUMMARY .............................................................................................................4

2 RESULTS ......................................................................................................................................5

   Figure 1. Total number of Sheep in UK Census areas on 02 June 2005 ...........................................5
   Figure 2. Sheep density in UK Census areas on 02 June 2005 .....................................................6
   Figure 3. Kernel-smoothed density map of sheep in England, with Census area boundaries overlaid, on 02 June 2005 ..........................................................7

3 REPORT QUALITY STATEMENT .................................................................................................8

   3.1 Coherence ...........................................................................................................................8
   3.2 Accuracy and precision ........................................................................................................8
       3.2.1 Sampling .......................................................................................................................8
       3.2.2 Coverage ......................................................................................................................8
       3.2.3 Non-response ...............................................................................................................8
       3.2.4 Data processing ............................................................................................................8
       3.2.5 Model assumption ........................................................................................................8
   3.3 Comparability .......................................................................................................................8

4 APPENDIX A ...............................................................................................................................9

   A.1 Additional Report Metadata Elements ..............................................................................9
1 EXECUTIVE SUMMARY

This report shows the distribution of sheep in the United Kingdom (according to the June Agricultural & Horticultural Census) on the 02 June 2005. It shows total numbers and density of sheep at a Census area level.

The figures in Section 2 show sheep distribution maps with Census areas displayed, each of which has been categorised by the abundance of sheep within its boundaries. The darker the colour categorisation, the greater the number of sheep.

Figures for both the total number of animals within the Census areas and their density are given. The numbers within administration areas help to manage resources and the density gives an indication of potential disease risk and transmission.

Figure 1 shows total numbers of sheep within Census areas on 02 June 2005. Areas coloured white have no sheep within their boundary. Grey areas have had data suppressed to prevent disclosure of data about individual premises. Regions with more sheep are the south-west and northern England, the majority of Wales, south and west Scotland and northern Northern Ireland.

Figure 2 shows the density of sheep per square kilometre (km²) of total land area within Census areas of the United Kingdom for the same date. More densely populated areas appear to be western and northern England, the majority of Wales, south-east Scotland and northern Northern Ireland.

Figure 3 shows a kernel-smoothed density map of England for 02 June 2005, which shows the distribution of sheep across the country with Census area boundaries overlaid.

Census areas are mostly Nomenclature for Units of Territorial Statistics (NUTS) level 3 areas with the exception of Wales. The published Welsh Census data is aggregated into 235 small agricultural areas but for the purpose of this report these have been aggregated into 10 counties and 2 regions.
2 RESULTS

Figure 1. Total number of Sheep in UK Census areas on 02 June 2005.
Figure 2. Sheep density in UK Census areas on 02 June 2005
Figure 3. Kernel-smoothed density map of sheep in England, with Census area boundaries overlaid, on 02 June 2005.
3 REPORT QUALITY STATEMENT

3.1 Coherence

- This report is sourced from five different data sources:
  - Four (one for each country in the UK) published datasets for the June 2005 Agricultural & Horticultural Census, aggregated to Census area.
- There are intrinsic differences in the structure, collation and analysis employed for each country’s Census. For further information see the below sections and the June Agricultural & Horticultural Census websites of each country in the UK.

3.2 Accuracy and Precision

3.2.1 Sampling

The June Agricultural & Horticultural Census 2005 is a survey based on a sample of different sized holdings. Holdings that are not sampled have data imputed for them based on previous Census returns and national trends.

3.2.2 Coverage

- Holdings will only be included in the Census if they have been registered as an agricultural premises. For more information please see the June Agricultural & Horticultural Census web pages.
- To prevent disclosure of information about individual premises, where data is available for fewer than five premises, the data within the area of concern is suppressed.

3.2.3 Non-response

- In 2005, 25% of agricultural holdings were sampled in the June Agricultural & Horticultural Census. For more information please see the June Agricultural & Horticultural Census web pages.
- Imputation techniques (used for non-sampled holdings) will differ from country to country. They are based on the previous return from the holding and national trends.

3.2.4 Data processing

All returns from the June Census go through a rigorous validation process and imputed records are also cross-referenced to administrative data where this is possible. Therefore every record is quality assured and only records that show a distinct deviation from expected are investigated further.

3.2.5 Model assumption

Any outlier data is assessed and investigated if necessary.

3.3 Comparability

- Sheep data for 2001 will have been considerably affected by the FMD outbreak. This should therefore be taken into consideration if this report is to be compared to the sheep population in 2001.
- There have been several changes in the way that Census data has been collected over time and hence there are some risks associated in comparing the data from year to year.
## 4 Appendix A

### A.1. Additional Report Metadata Elements

<table>
<thead>
<tr>
<th>Coverage. spatial</th>
<th>UK and England broken down by Census area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coverage. temporal</td>
<td>2005-06-02</td>
</tr>
<tr>
<td>Date. accepted</td>
<td>2006-10-27</td>
</tr>
<tr>
<td>Date. acquired</td>
<td>2006-10-27</td>
</tr>
<tr>
<td>Date. updating frequency</td>
<td>Yearly</td>
</tr>
<tr>
<td>Description</td>
<td>This report shows distribution of total numbers of sheep and density of sheep (based on total land) by UK Census areas on the day of the 2005 UK Census (02 June). It also shows a kernel smoothed map of sheep density for England.</td>
</tr>
<tr>
<td>Language</td>
<td>English</td>
</tr>
<tr>
<td>Location. home</td>
<td>Defra, London, Page Street server</td>
</tr>
<tr>
<td>Rights. copyright</td>
<td>Crown copyright (See Page 2)</td>
</tr>
<tr>
<td>Status</td>
<td>Version 1</td>
</tr>
<tr>
<td>Subject. Category</td>
<td>Farming</td>
</tr>
<tr>
<td>Subject. Keyword</td>
<td>Sheep Farming</td>
</tr>
<tr>
<td>Subject. Programme</td>
<td>Veterinary Surveillance Strategy</td>
</tr>
<tr>
<td>Subject. Project</td>
<td>RADAR</td>
</tr>
</tbody>
</table>