

Quality report: Sawmill Survey

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Forest Research is the Research Agency of the Forestry Commission and is the leading UK organisation engaged in forestry and tree related research.

The Agency aims to support and enhance forestry and its role in sustainable development by providing innovative, high quality scientific research, technical support and consultancy services.

Introduction

The sawmill survey is one of a series of annual surveys and data requests used to produce statistics on the UK timber industry. The survey is run by Forest Research (in association with the Northern Ireland Forest Service) to collect data from sawmills in the UK that are believed to use UK-grown logs.

The survey comprises 2 parts. A detailed questionnaire now goes to around 30 sawmills that have annual production of at least 25,000 m³ of sawnwood and a short questionnaire, asking for summary data only, is sent to all other sawmills.

The list of sawmills covered by the survey is maintained by Forest Research and is updated regularly, following consultations with the Expert Group on Timber and Trade Statistics and others, to add new mills and remove those that have closed. Occasional exercises are also undertaken to check the list against businesses held in the Inter-Departmental Business Register.

Relevance

The sawmill survey requests data annually from all sawmills in the UK that are believed to use UK-grown logs. It asks for data on consumption of logs, production of sawnwood, woodfuel use & sales, certification and total employment. For sawmills receiving the detailed questionnaire (accounting for around 85% of total sawnwood production in the UK), more detail is requested, covering the source of logs, sawnwood product markets, other products and employment.

Figures on consumption of UK-grown roundwood from the sawmill survey are combined with data from other sources to produce estimates of total deliveries of UK-grown roundwood.

Estimates are made for non-respondents by rolling forward data from previous years for these mills. For larger mills, these estimates may be modified to take account of advice from the Expert Group on Timber and Trade Statistics.

The main uses of the sawmill survey include:

- Deliveries of roundwood – Trends in the supply of, and demand for, UK grown timber are monitored by the Forestry Commission, devolved administrations, the UK timber industry and others;
- International reporting – Deliveries of logs and sawnwood production in the UK are provided to UN Economic Commission for Europe, UN Food and Agriculture Organisation and others as part of the Joint Forest Sector Questionnaire (covering wood production and trade);
- UK Government Departments and devolved administrations – deliveries of roundwood and/or sawnwood production are used in a number of statistical publications produced by others.

The Expert Group on Timber and Trade Statistics (EGTTS), comprising representatives from the UK timber industry, the Forestry Commission, Scottish Forestry, Natural Resources Wales and Northern Ireland Forest Service are consulted regularly to ensure that UK wood production and trade statistics remain relevant to users. Further information on the EGTTS is available at www.forestresearch.gov.uk/tools-and-resources/statistics/about-our-statistics/expert-group-on-timber-and-trade-statistics/.

Accuracy

The survey usually approaches all relevant businesses (around 150 in recent years) and, as a result, there are no sampling errors. As a result of the COVID-19 pandemic, the administration of the survey was restricted to digital methods only, so several small mills (for whom no email addresses were available) were not approached, giving a total of 98 businesses approached. The figures for non-respondents to the survey, below, include around 50 very small mills that were not approached to participate in the 2020 survey.

There are a number of non-sampling errors associated with this survey, related to errors of coverage, measurement, processing and non-response. The following tables provide an indication of the response rates (overall and for key items), level of imputed values and the editing rate, to assist users in understanding the quality of the data.

Unit response rates

Survey response rates for 2020 by size of sawmill and by country are provided in tables 1 and 2 below. The overall response rate to the sawmill survey in 2020 was 34% of mills. The weighted response rate (taking account of the total sawnwood production of each mill) was 87%, reflecting the higher response rate amongst larger mills. The higher weighted response rates indicate that non-response to the survey has a relatively small effect on the accuracy of the results.

Table 1: Survey response rates by size of mill, 2020

Size of mill (total production) ¹	Number of respondents	Number of non-respondents	Total mills	Response rate (unweighted) ²	Response rate (weighted) ³
< 1	8	47	55	15%	19%
1 - < 5	2	30	32	6%	9%
5 - < 10	5	8	13	38%	39%
10 - < 25	9	9	18	50%	45%
25 - < 50	9	1	10	90%	92%
50 - < 100	6	2	8	75%	77%
100+	11	0	11	100%	100%
All mills	50	97	147	34%	87%

Notes:

1. Size categories are based on total sawnwood production (softwood and hardwood), in thousand m³.
2. Survey response rates reported here are calculated as the number of returns (full or partial) divided by the number of returns (full or partial) + number of non-respondents. Nil returns (e.g. where sawmills have closed) are excluded from this calculation.
3. Weighted by total sawnwood production (softwood and hardwood).

Table 2: Survey response rates by country, 2020

Country	Number of respondents	Number of non-respondents	Total mills	Response rate (unweighted) ¹	Response rate (weighted) ²
England	16	63	79	20%	78%
Wales	3	9	12	25%	81%
Scotland	23	24	47	49%	90%
Northern Ireland	8	1	9	89%	100%
All mills	50	97	147	34%	87%

Notes:

1. Survey response rates reported here are calculated as the number of returns (full or partial) divided by the number of returns (full or partial) + number of non-respondents. Nil returns (e.g. where sawmills have closed) are excluded from this calculation.
2. Weighted by total sawnwood production (softwood and hardwood).

Key item response rates

Table 3 presents the response rates for the following key items: total consumption, total sawnwood production, total employment, certified input (for those with a Chain of Custody certificate) and total other products (detailed survey only). These item response rates are restricted to respondents to the survey. The high response rates indicate that item non-response has very little impact on the accuracy of the results for key items.

Table 3: Key item response rates, 2020

Key item	Response	Non-response	Total	Response rate (unweighted) ¹	Response rate (weighted) ²
Consumption	50	0	50	100%	100%
Production	50	0	50	100%	100%
Employment	50	0	50	100%	100%
Certified input ³	37	0	37	100%	100%
Other products ⁴	25	0	25	100%	100%

Notes:

1. Unweighted item response rate is the number of responses to that item divided by total respondents.
2. Weighted by total estimated value of key item.
3. Item only requested from mills with Chain of Custody certificate.
4. Covers responses to the detailed sawmill survey only.

Total contribution to key items from imputed values

In compiling results from the sawmill survey, values are imputed to estimate for non-response (either to specific questions or to the entire survey). Most values for survey non-respondents are imputed by rolling forward the values for that mill in the previous year, although values for larger non-respondents may be modified to take account of advice from the Expert Group on Timber & Trade Statistics. For item non-response, imputed values will also take account of responses to the rest of the survey.

Table 4 presents the percentage of the total value that is imputed for the following key items: total consumption, total sawnwood production, total employment, certified input (for those with a Chain of Custody certificate) and total other products (detailed survey only).

Table 4: Total contribution to key items from imputed values, 2020

Key item	Imputed	Not imputed	Total	% imputed
Consumption (thousand green tonnes)	909	5,253	6,162	15%
Production (thousand m ³)	446	2,893	3,340	13%
Employment (full-time equivalents)	993	3,077	4,069	24%
Certified input (thousand m ³) ¹	1,864	4,298	6,162	30%
Other products (thousand green tonnes) ²	182	2,666	2,848	6%

Notes:

1. Item only requested from mills with Chain of Custody certificate.
2. Covers responses to the detailed sawmill survey only.

Editing rate for key items

The responses received to the survey are checked to ensure that the values provided to questions are consistent with each other and with previous responses from the same mill. Where there are clear inconsistencies that cannot be explained, values are revised to a more realistic level.

Table 5 presents the percentage of sawmills for which a value was edited for the following key items: total consumption, total sawnwood production, total employment, certified input (for those with a Chain of Custody certificate) and total other products (detailed survey only). The low editing rates indicate that editing has very little impact on the accuracy of the results for key items.

Table 5: Editing rate for key items, 2020

Key item	Value corrected	Value uncorrected	Total	Editing rate
Consumption	3	47	50	6%
Production	4	46	50	8%
Employment	0	50	50	0%
Certified input ³	0	37	37	0%
Other products ⁴	2	23	25	8%

Notes:

1. Results on employment, certified input and other products will not be released until September. At this stage limited data checking and analysis has been undertaken on these items.
2. Item only requested from mills with Chain of Custody certificate.
3. Covers responses to the detailed sawmill survey only.

Timeliness and punctuality

Provisional results from the sawmill survey are published in UK Wood Production and Trade: provisional figures in mid-May, 4.5 months after the end of the reference period (calendar year).

Final results are published in Forestry Statistics at end September, 9 months after the end of the reference period (calendar year).

Accessibility and clarity

The annual Forestry Statistics publication, available on the Forest Research website at www.forestresearch.gov.uk/statistics provides the most comprehensive results from the sawmill survey, including background information on the data collected, response rates, methodology, revisions and reporting. Forestry Statistics is published in line with Forest Research's website accessibility statement.

Longer time series data, providing additional breakdowns for some statistics, are published in accompanying tables to UK Wood Production and Trade: provisional figures. Longer time series are also available for Forestry Statistics. Excel and ODS versions of all tables in UK Wood Production and Trade: provisional figures and Forestry Statistics are available to download from the Forest Research website.

Summary results are also published in Forestry Facts & Figures.

Comparability

The sawmill survey has been run annually by Forest Research/ the Forestry Commission since 1994. Results for a 10-year period are published in Forestry Statistics.

The coverage and periodicity of the detailed survey has changed as follows:

- 1996 and earlier: triennial for mills producing at least 1 thousand m³ sawnwood;
- 1998-2004: biennial for mills producing at least 5 thousand m³ sawnwood;
- From 2005: annual for mills producing at least 10 thousand m³ sawnwood.
- From 2016: annual for mills producing at least 25,000 m³ of sawnwood.

A number of other refinements have been made to the survey, in response to consultation with the Expert Group on Timber and Trade Statistics and suggestions/issues raised by users and data providers. These include:

- the addition of new data items on the short questionnaire (sales to bioenergy from the 2006 survey; firewood sales, internal use of woodfuel and total employment from the 2008 survey; other products from the 2010 survey; sawlog consumption by country from the 2015 survey);
- changes to some of the items requested on the detailed questionnaire (e.g. reduction in employment categories, adjustments to other product categories, etc); and
- the addition of a new question on preservative treatment of sawnwood to both questionnaires for the 2020 survey.

Coherence

Data on UK softwood deliveries (obtained from the sawmill survey and other surveys and data requests) are compared with estimates of total UK softwood removals (obtained from Forestry England/Forestry and Land Scotland/Natural Resources Wales/Forest Service administrative systems and Forest Research's Private Sector Softwood Removals Survey), available in the annual Forestry Statistics publication.

Data on GVA and employment for Standard Industrial Classification (SIC 2007) 16.1, covering sawmilling and planing of wood, from the Annual Business Survey is presented in Forestry Statistics. However, this is not directly comparable to the results from the sawmill survey, as SIC 16.1 includes businesses involved in treatment of wood and businesses solely processing imported wood, both of which are excluded from the scope of the sawmill survey. In addition, businesses included in the sawmill survey whose main activity is assigned to another SIC code are not included in the Annual Business Survey results for SIC 16.1. There were estimated to be 147 active sawmills processing UK-grown roundwood in 2020, as identified by the sawmill survey. The Office for National Statistics publication UK Business: Activity, Size and Location indicates that there were 510 businesses in SIC 16.1 in 2020.

Revisions

Our Revisions Policy, available at www.forestresearch.gov.uk/tools-and-resources/statistics/about-our-statistics/code-of-practice/quality-of-official-statistics/, outlines our general approach to revisions.

All the main results from the sawmill survey (number of mills, consumption, production) are subject to revision annually, as information becomes available about mills opening or closing, or new information becomes available for previous non-respondents. The most common revisions are relatively small downward changes, as late information is incorporated about mill closures, but this can vary from year to year as special exercises are run to validate the survey population. Information about new mills opening can on occasion cause much larger upward revisions to softwood volumes. Results from the survey of larger mills (biennial to 2004, subsequently annual), which provides more detailed information, are not normally revised.

Information on significant revisions made to published statistics is available in the Annex.

Other issues related to quality

Statistical disclosure control checks are run on the sawmill survey annually, prior to publication, to ensure that the results to be released are not likely to be disclosive for individual businesses. Further information on the disclosure checks and on the methodology used are available in the methodology note on the sawmill survey, available at www.forestresearch.gov.uk/tools-and-resources/statistics/about-our-statistics/surveys/sawmill-survey/.

Annex: Significant revisions to published statistics

UK Timber Statistics 2006, released in August 2006, was republished in December 2006. This was primarily to correct a reporting error in the Sawmill Survey, in which data for two mills were switched. The UK totals were unaffected, but the corrections resulted in an increase in consumption and production in Scotland and a corresponding decrease in England. The opportunity was also taken to make some other revisions, taking account of some late returns and making some other minor amendments. These revisions resulted in a slight drop in sawmills' certified consumption and production, a slight increase in the percentage of other products being sold for bio-energy and a corresponding drop in other products being sold to wood processing industries.

Revisions were made to the sawmill survey in 2004 to take account of new mills opening. These sawmills first responded to the 2003 survey, but were believed to have opened before then. The revisions resulted in an uplift to softwood consumption and sawn softwood production figures for 2001 and 2002 of around 5%.

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