



SAWMILL SURVEY 2000

Report on the survey of sawmill consumption and production in Great Britain in 2000.

Prepared by Economics & Statistics Unit of the Forestry Commission in association with the Forestry Commission Advisory Panel (FCAP) Sub-Committee on Supply and Demand.

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GB SAWMILL SURVEY 2000

INTRODUCTION

This report gives results from the Sawmill Survey for 2000.

This survey is designed to find out about mills that carry out primary processing of British logs. In the Standard Industrial Classification (SIC), this is part of heading 201: sawmilling and planing of wood, impregnation of wood. The survey excludes mills that only saw imported timber, and those that only saw roughsawn timber or small roundwood, which are also in SIC 2001. Statistics on the sawing of small roundwood for producing round fencing material are collected by a separate survey, reported in British Timber Statistics, which also contains statistics on other processing industries using small roundwood. The Forestry Commission does not collect statistics on secondary processing or on the processing of imported wood.

The survey of sawmills in Great Britain is carried out by the Economics & Statistics Unit of the Forestry Commission, in association with the Forestry Commission Advisory Panel Sub-Committee on Supply and Demand (SSD). We gratefully acknowledge the assistance of all sawmills that completed the survey questionnaire, of the UK Forest Products Association and the members of SSD who provided advice.

The report consists of two sections; the first reports results from the annual survey, the second results from the detailed survey of the largest mills which is now carried out every second year.

Figures in the tables are individually rounded, so the constituent items may not add to the totals given.

GB SAWMILLS - ANNUAL SURVEY 2000

This section gives results for timber consumption and sawnwood production from the Sawmill Survey for 2000.

Survey Responses

In the 2000 Survey 374 questionnaires were sent out. Following a reminder and a telephone call to the largest non-respondents, 193 responses were received, a response rate of 52%.

The latest estimates for consumption and production in the last seven years, including estimates for non-respondents, are shown in Table 1 expressed in thousand cubic metres underbark for consumption, and thousand cubic metres sawnwood for production. While the 2000 sawmill survey was being carried out, Forest Enterprise offices around Britain were asked to provide information on mills in their area, who had not responded to the annual sawmill survey since 1998 or earlier. Estimates for 1994-1999 have been revised to include information supplied during this exercise. Revisions were also made to historical data for sawmills that reported data for the first time in 2000, and also to take account of mill closures before 2000 which were only notified to us during the 2000 survey.

Table 1: Consumption and production 1994 - 2000

| | | | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
|-----------|-------------|-----------------------|-------|-------|-------|-------|-------|-------|-------|
| Softwood: | consumption | 000 m ³ ub | 3,366 | 3,329 | 3,425 | 3,490 | 3,570 | 3,859 | 3,936 |
| | production | 000 m^3 | 1,923 | 1,899 | 1,917 | 1,980 | 1,995 | 2,147 | 2,159 |
| Hardwood: | consumption | 000 m ³ ub | 316 | 330 | 258 | 259 | 227 | 205 | 183 |
| | production | 000 m^3 | 180 | 190 | 151 | 143 | 126 | 119 | 107 |

Imported Round Timber

Of the mills covered by the survey (those that saw British timber) it is estimated that 16 mills used imported round timber in 2000, totalling 9,200 m³ ub softwood and 7,900 m³ ub hardwood. This is based on responses for 2000 and estimates for non-respondents that had reported using imported round timber in earlier years.

Number of sawmills

Based on all the 2000 survey responses, together with data from previous years for those who did not respond for 2000, it is estimated that there were 297 sawmills processing British timber in 2000, of which 178 produced at least 1,000 m³ sawnwood. Of those 178 mills, 132 processed softwood only, 11 hardwood only, and 35 both hardwood and softwood. Of the 119 smaller mills, 48 processed softwood only, 17 hardwood only, and 54 both hardwood and softwood.

Table 2: Number of sawmills 1994 - 2000

| Size Category (production) | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
|-------------------------------|------|------|------|------|------|------|------|
| Great Britain | 483 | 440 | 393 | 367 | 339 | 314 | 297 |
| <1,000m ³ | 252 | 215 | 187 | 170 | 144 | 136 | 119 |
| 1,000 - 4,999m ³ | 144 | 139 | 122 | 116 | 116 | 98 | 100 |
| 5,000 - 24,999m ³ | 66 | 66 | 62 | 58 | 57 | 56 | 53 |
| 25,000 - 49,999m ³ | 14 | 15 | 15 | 15 | 11 | 10 | 12 |
| 50,000m ³ + | 7 | 5 | 7 | 8 | 11 | 14 | 13 |
| Scotland | 121 | 110 | 98 | 97 | 93 | 84 | 85 |
| <1,000m ³ | 57 | 47 | 42 | 43 | 36 | 30 | 29 |
| 1,000 - 4,999m ³ | 29 | 29 | 24 | 22 | 25 | 24 | 27 |
| 5,000 - 24,999m ³ | 26 | 25 | 22 | 22 | 22 | 20 | 18 |
| 25,000 - 49,999m ³ | 5 | 7 | 7 | 6 | 4 | 2 | 4 |
| 50,000m ³ + | 4 | 2 | 3 | 4 | 6 | 8 | 7 |
| England | 324 | 293 | 260 | 238 | 215 | 200 | 185 |
| <1,000m ³ | 176 | 151 | 128 | 113 | 95 | 93 | 81 |
| 1,000 - 4,999m ³ | 107 | 100 | 90 | 86 | 82 | 66 | 67 |
| 5,000 - 24,999m ³ | 34 | 36 | 34 | 31 | 30 | 32 | 28 |
| 25,000 - 49,999m ³ | 5 | 4 | 6 | 6 | 5 | 5 | 5 |
| 50,000m ³ + | 2 | 2 | 2 | 2 | 3 | 4 | 4 |
| Wales | 38 | 37 | 35 | 32 | 31 | 30 | 27 |
| <1,000m ³ | 19 | 17 | 17 | 14 | 13 | 13 | 9 |
| 1,000 - 4,999m ³ | 8 | 10 | 8 | 8 | 9 | 8 | 6 |
| 5,000 - 24,999m ³ | 6 | 5 | 6 | 5 | 5 | 4 | 7 |
| 25,000 - 49,999m ³ | 4 | 4 | 2 | 3 | 2 | 3 | 3 |
| 50,000m ³ + | 1 | 1 | 2 | 2 | 2 | 2 | 2 |

British Softwood

Consumption of British softwood (in thousand cubic metres underbark) and production (in thousand cubic metres sawnwood) are shown in the following tables, including estimates for non respondents. Total softwood consumption was 3.94 million m³ underbark and sawn softwood production was 2.16 million m³ sawnwood. While consumption rose by around 2% from 1999, production rose by only around 0.5%.

Apparent recovery (calculated as the ratio of sawnwood production to underbark log consumption) was 55%.

Table 3: Softwood consumption - 2000

000 m³ underbark

| | Sawmill size category (000 m³ total production: hard + soft) | | | | | | |
|----------|--|--------|---------|----------|-------|-------|--|
| | <1 | 1 - <5 | 5 - <25 | 25 - <50 | 50+ | Total | |
| GB Total | 53 | 353 | 800 | 762 | 1,969 | 3,936 | |
| Scotland | 16 | 130 | 379 | 251 | 951 | 1,728 | |
| England | 36 | 192 | 325 | 318 | 639 | 1,510 | |
| Wales | 1 | 31 | 96 | 192 | 378 | 698 | |

Table 4: Softwood production - 2000

000 m³ sawnwood

| | Sawmill size category (000 m³ total production: hard + soft) | | | | | | |
|----------|---|--------|---------|----------|-------|-------|--|
| | <1 | 1 - <5 | 5 - <25 | 25 - <50 | 50+ | Total | |
| GB Total | 31 | 211 | 447 | 405 | 1,065 | 2,159 | |
| Scotland | 10 | 76 | 206 | 141 | 520 | 953 | |
| England | 21 | 116 | 185 | 161 | 354 | 836 | |
| Wales | 0 | 19 | 56 | 103 | 191 | 369 | |

Summary

Table 5 (on the next page) gives a summary of production and consumption, for softwood for the years 1994 to 2000.

Table 5 - Summary softwood statistics: 1994 - 2000

| | Year | Log consumption (000 m ³ ub) | Sawnwood production (000 m ³ sawn) | Apparent recovery (%) |
|------------------|--------------------------|---|---|-----------------------|
| | | (000 III ub) | (000 m sawn) | (/0) |
| Great Britain | 1994 | 3,366 | 1,923 | 57 |
| 01 0 2110 | 1995 | 3,329 | 1,899 | 57 |
| | 1996 | 3,425 | 1,917 | 56 |
| | 1997 | 3,490 | 1,980 | 57 |
| | 1998 | 3,570 | 1,995 | 56 |
| | 1999 | 3,859 | 2,147 | 56 |
| | 2000 | 3,936 | 2,159 | 55 |
| | 1004 | 1.440 | 0.1.1 | |
| Scotland | 1994 | 1,440 | 814 | 57 |
| | 1995 | 1,394 | 784 | 56 |
| | 1996 | 1,444 | 799 | 55 |
| | 1997 | 1,478 | 823 | 56 |
| | 1998 | 1,504 | 834 | 55 |
| | 1999 | 1,614 | 894 | 55 |
| | 2000 | 1,728 | 953 | 55 |
| England | 1994 | 1,426 | 828 | 58 |
| O | 1995 | 1,381 | 810 | 59 |
| | 1996 | 1,399 | 803 | 57 |
| | 1997 | 1,407 | 823 | 58 |
| | 1998 | 1,458 | 835 | 57 |
| | 1999 | 1,564 | 892 | 57 |
| | 2000 | 1,510 | 836 | 55 |
| Wales | 1994 | 499 | 281 | 56 |
| vv aies | 199 4 1995 | 554 | 304 | 55 |
| | 1995 1996 | 581 | | 55 |
| | | | 316 | |
| | 1997 | 605 | 333 | 55 |
| | 1998 | 608 | 326 | 54 |
| | 1999 | 681 | 361 | 53 |
| | 2000 | 698 | 369 | 53 |

British Hardwood

Consumption of British hardwood (in thousand cubic metres underbark) and production (in thousand cubic metres sawnwood) are shown in the following tables, again including estimates for non respondents. Results for the larger categories are combined, to avoid disclosure of individual returns. Total hardwood consumption was 183 thousand m³ underbark and total sawn hardwood production was 107 thousand m³ sawnwood, both down around 10% on 1999. Apparent recovery is 59%, slightly up on 1999.

Table 6: Hardwood consumption - 2000

000 m³ underbark

| | (00 | | | | |
|----------|-----|--------|---------|-----|-------|
| | <1 | 1 - <5 | 5 - <10 | 10+ | Total |
| GB Total | 21 | 57 | 91 | 14 | 183 |
| Scotland | 1 | 2 | 5 | 0 | 8 |
| England | 18 | 55 | 75 | 14 | 161 |
| Wales | 2 | 0 | 11 | 0 | 13 |

Table 7: Hardwood production - 2000

000 m³ sawnwood

| | (00 | | | | | | |
|----------|-----|-----------------------|----|---|-----|--|--|
| | <1 | <1 1 - <5 5 - <10 10+ | | | | | |
| GB Total | 12 | 35 | 53 | 8 | 107 | | |
| Scotland | 1 | 1 | 3 | 0 | 5 | | |
| England | 10 | 33 | 42 | 8 | 94 | | |
| Wales | 1 | 0 | 8 | 0 | 9 | | |

Summary

Table 8 (on the next page) gives a summary of production and consumption, for hardwood, for the years 1994 to 2000.

Table 8 - Summary hardwood statistics: 1994 - 2000

| | Year | Log consumption (000 m ³ ub) | Sawnwood production (000 m ³ sawn) | Apparent recovery (%) |
|----------------------|------|---|---|-----------------------|
| | | | | |
| Great Britain | 1994 | 316 | 180 | 57 |
| | 1995 | 330 | 190 | 58 |
| | 1996 | 258 | 151 | 59 |
| | 1997 | 259 | 143 | 55 |
| | 1998 | 227 | 126 | 55 |
| | 1999 | 205 | 119 | 58 |
| | 2000 | 183 | 107 | 59 |
| Scotland | 1994 | 12 | 6 | 51 |
| | 1995 | 16 | 9 | 56 |
| | 1996 | 12 | 6 | 51 |
| | 1997 | 13 | 6 | 50 |
| | 1998 | 10 | 5 | 53 |
| | 1999 | 10 | 5 | 48 |
| | 2000 | 8 | 5 | 56 |
| England | 1994 | 294 | 167 | 57 |
| | 1995 | 304 | 175 | 57 |
| | 1996 | 238 | 140 | 59 |
| | 1997 | 239 | 131 | 55 |
| | 1998 | 209 | 115 | 55 |
| | 1999 | 187 | 109 | 58 |
| | 2000 | 161 | 94 | 58 |
| Wales | 1994 | 10 | 7 | 63 |
| | 1995 | 11 | 7 | 64 |
| | 1996 | 8 | 5 | 62 |
| | 1997 | 8 | 5 | 63 |
| | 1998 | 7 | 5 | 66 |
| | 1999 | 7 | 5 | 65 |
| | 2000 | 13 | 9 | 67 |

GB SAWMILLS - Detailed Survey (Mills with over 5000m³ production)

Additional information was collected in 2000 from mills that produced at least 5000m³ sawnwood. Similar information had been collected in 1998, 1996, 1993 and 1990, but the scope before 1998 had also included mills producing 1,000-5,000m³ sawnwood. This section of the report presents the results for 2000 (with the corresponding figures for 1998 in brackets).

Of the estimated 78 (79) mills producing over 5000 m³ sawnwood, 40 (52) completed a detailed questionnaire. The response rate was worse than in 1998 for all size categories, dropping below 30% for the smallest category (5,000-10,000 m³). Because of the low response rate for 2000, data from 1998 were used to estimate figures for those who had responded for 1998 but not for 2000. All results are shown rated up to the total number of mills and to their consumption and production figures reported in the annual surveys. Further details of the response rates and the calculation of rating factors are given in Appendix 1.

Days and hours worked

Most mills, 78% (85%) worked for between 220 and 260 days. This is similar to 1998, 1996 and 1993.

Most mills worked for 8 to 10 hours a day; 52% (43%) worked for at least 8 hours but less than 9, and 26% (35%) for at least 9 hours but less than 10. The large mills with production of over 50,000m³ tended to work longer hours. Responses said that the site could sustain double-shift or continuous working for 44% (44%) of all mills, including most of those with production of over 50,000m³.

Converting long length logs

56% (58%) of mills indicated that they converted long length logs into shorter logs before primary breakdown.

Softwood

GB Summary (see Table 10)

Total **softwood capacity**, defined as the level that the site could sustain on single-shift working, was 3,093,000 (3,056,000) cubic metres underbark. About 50% (40%) of the softwood capacity was in mills producing more than 50,000 cubic metres sawnwood. Total **softwood consumption** was 3,531,000 (3,145,000) cubic metres underbark; consumption was running at 114% (103%) of capacity, because of double-shift working.

For mills that reported a breakdown of softwood consumption by **size category**, 74% (76%) were large logs (top diameter 16 cm and over). 55% (53%) of mills reported a maximum butt diameter between 30-70 cm, with only 11% (17%) reporting a smaller maximum. The **species breakdown** showed little change since 1998; the species reported were spruce 67% (68%), pine 19% (18%) and other conifers 15% (14%).

Softwood production broken down by **market classification** showed that 34% (31%) went to construction (including agricultural buildings), 34% (32%) to fencing, 29% (33%) to packaging and pallets and 3% (4%) to all other markets. Compared with 1998, this is an increase in construction, and a decrease in packaging/ pallets.

Softwood **co-products** added up to 1,842,000 (1,748,000) green tonnes. 83% (83%) of softwood co-products were sold to wood processing industries, 11% (11%) sold as bark, 5% (4%) were sold to other industries, and 1% (2%) burnt for heat.

England, Scotland & Wales

The main flows of softwood logs between countries were from Scotland and Wales into England. Around 85% (82%) of reported Scottish logs were sawn in Scottish mills. Around 68% (61%) of reported Welsh logs were sawn in Welsh mills; the rest were sawn in English mills just over the border.

Table 9: Flow of softwood logs between countries (000m³ underbark)

| | | Sawmills in | | | | |
|------------------------------------|-------|-------------|---------|-------|--|--|
| Source | GB | Scotland | England | Wales | | |
| England | 552 | 58 | 462 | 33 | | |
| Scotland | 1,667 | 1,424 | 235 | 9 | | |
| Wales | 366 | 0 | 116 | 250 | | |
| Imports | 9 | 4 | 3 | 2 | | |
| Total response | 2,596 | 1,488 | 815 | 294 | | |
| Non-response to question or survey | 935 | 94 | 467 | 373 | | |
| Total | 3,531 | 1,582 | 1,282 | 667 | | |

Table 10 gives information on consumption and production by size category. Table 11 presents the same information as Table 10, but broken down by country (England & Wales and Scotland) instead of size category. Separate figures are not given for Wales, because of low response.

Table 10: Softwood - consumption and production 2000 Mills with at least 5000m³ production : GB size category breakdown

| | Mill size o | | | | |
|--|-------------|----------|----------|-------|-------|
| | 5 - <10 | 10 - <25 | 25 - <50 | 50+ | Total |
| Capacity (000 m ³ underbark) | 346 | 434 | 812 | 1,501 | 3,093 |
| % of consumption against capacity | 95 | 108 | 94 | 131 | 114 |
| Consumption (000 m ³ underbark) | 329 | 470 | 762 | 1,969 | 3,531 |
| Top diameter 16cm+ | 203 | 329 | 493 | 1,570 | 2,594 |
| Top diameter <16cm | 100 | 142 | 269 | 400 | 910 |
| Not reported | 26 | 0 | 0 | 0 | 26 |
| Spruce | 135 | 172 | 475 | 1,518 | 2,300 |
| Pine | 99 | 150 | 190 | 203 | 641 |
| Other conifer | 58 | 106 | 97 | 249 | 511 |
| Not reported | 37 | 42 | 0 | 0 | 79 |
| Sawnwood production (000 m ³) | 183 | 264 | 405 | 1,065 | 1,918 |
| Construction | 19 | 41 | 81 | 510 | 651 |
| Fencing | 79 | 93 | 244 | 231 | 647 |
| Packaging & pallets | 79 | 124 | 68 | 289 | 560 |
| Mining timber | 1 | 0 | 3 | 3 | 7 |
| Furniture | 0 | 0 | 0 | 0 | 0 |
| Other | 5 | 5 | 10 | 33 | 52 |
| Co-products (000 green tonnes) | 138 | 227 | 452 | 1,025 | 1,842 |
| Sales to wood processing industries | 117 | 181 | 370 | 857 | 1,525 |
| Sawdust | 23 | 34 | 94 | 189 | 340 |
| Slabwood | 1 | 0 | 0 | 1 | 2 |
| Peeled Chips | 40 | 99 | 275 | 618 | 1,032 |
| Unpeeled chips | 49 | 45 | 0 | 44 | 138 |
| Other | 4 | 4 | 0 | 5 | 13 |
| Other sales | 10 | 27 | 32 | 15 | 84 |
| Sawdust | 8 | 17 | 3 | 7 | 34 |
| Slabwood | 0 | 0 | 0 | 0 | 0 |
| Peeled Chips | 0 | 1 | 29 | 0 | 30 |
| Unpeeled chips | 2 | 9 | 0 | 5 | 16 |
| Firewood | 1 | 1 | 0 | 0 | 2 2 |
| Other | 0 | 0 | 0 | 2 | |
| Sold as bark | 10 | 17 | 47 | 132 | 206 |
| Burnt for heat | 0 | 2 | 2 | 21 | 24 |
| Disposed rubbish/burning | 1 | 1 | 0 | 0 | 2 |

¹ Size category is based on total production of mill (softwood and hardwood), not just softwood production

Table 11: Softwood - consumption and production 2000 Mills with at least 5000m³ production: country breakdown

| | Scotland | England and | Great Britain |
|--|----------|-------------|---------------|
| 2 | | Wales | |
| Capacity (000 m ³ underbark) | 1,431 | 1,662 | 3,093 |
| % of consumption against capacity | 111 | 117 | 114 |
| Consumption (000 m ³ underbark) | 1,582 | 1,949 | 3,531 |
| Top diameter 16cm+ | 1,257 | 1,337 | 2,594 |
| Top diameter <16cm | 325 | 585 | 910 |
| Not reported | 0 | 26 | 26 |
| Spruce | 1,122 | 1,178 | 2,300 |
| Pine | 242 | 399 | 641 |
| Other conifer | 176 | 335 | 511 |
| Not reported | 42 | 37 | 79 |
| Sawnwood production (000 m ³) | 868 | 1,050 | 1,918 |
| Construction | 416 | 236 | 651 |
| Fencing | 170 | 477 | 647 |
| Packaging & pallets | 252 | 308 | 560 |
| Mining timber | 3 | 4 | 7 |
| Furniture | 0 | 0 | 0 |
| Other | 27 | 25 | 52 |
| Co-products (000 green tonnes) | 885 | 957 | 1,842 |
| Sales to wood processing industries | 752 | 773 | 1,525 |
| Sawdust | 150 | 190 | 340 |
| Slabwood | 0 | 2 | 2 |
| Peeled Chips | 552 | 481 | 1,032 |
| Unpeeled chips | 41 | 96 | 138 |
| Other | 9 | 4 | 13 |
| Other sales | 27 | 57 | 84 |
| Sawdust | 19 | 16 | 34 |
| Slabwood | 0 | 0 | 0 |
| Peeled Chips | 0 | 30 | 30 |
| Unpeeled chips | 6 | 10 | 16 |
| Firewood | 1 | 1 | 2 |
| Other | 2 | 0 | 2 |
| Sold as bark | 84 | 122 | 206 |
| Burnt for heat | 20 | 4 | 24 |
| Disposed rubbish/burning | 1 | 1 | 2 |

Hardwood

GB Summary (See Table 12)

Total **hardwood capacity** (defined as for softwood) was 138,000 (97,000) cubic metres underbark. **Hardwood consumption** was 105,000 (97,000) cubic metres underbark, 76% (100%) of single shift capacity. The 2000 and 1998 surveys give a more limited coverage of hardwood than previous years, because of the exclusion of mills producing less than 5,000m³ sawnwood, and the results are more subject to distortion by low response rates.

For mills that reported a breakdown of hardwood consumption by size category, two-thirds (over half) of the hardwood consumed was top diameter 40cm and over. The maximum butt diameter of log most mills were able to cut was over 100cm. The **main species** reported were oak 38% (37%), beech 22% (26%), ash 15% (13%) and sycamore 7% (13%).

Hardwood production broken down by **market classification** showed that the main markets were sawn mining timber 35% (22%), furniture 32% (36%) and construction 21% (14%). **Hardwood co-products** added up to 37,000 (33,000) green tonnes, of which around 31,000 (26,000) green tonnes were sold to wood processing industries.

England, Scotland & Wales

No Welsh mills that sawed hardwood were in the scope for the survey (mills sawing over 5,000m³), and little hardwood production was in the scope for Scotland, so only GB totals are given.

Table 12: Hardwood - consumption and production 2000 All mills with total production $^{\rm I}$ of at least 5,000m $^{\rm 3}$

| | Great Britain |
|--|---------------|
| Capacity (000 m ³ underbark) | 138 |
| % of consumption against capacity | 76 |
| Consumption (000 m ³ underbark) | 105 |
| Top diameter 40cm+ | 71 |
| Top diameter <40cm | 34 |
| | |
| Oak | 40 |
| Ash | 16 |
| Beech | 23 |
| Sycamore | 8 |
| Elm | 2 |
| Other white hard | 3 |
| Other hard | 7 |
| Not reported | 6 |
| Sawnwood production (000 m ³) | 61 |
| Construction | 13 |
| Fencing | 3 |
| Packaging & pallets | 2 |
| Mining timber | 21 |
| Furniture | 19 |
| Other | 3 |
| Co-products (000 green tonnes) | 37 |
| Sales to wood processing industries | 31 |
| Sawdust | 3 |
| Slabwood | 1 |
| Peeled Chips | 5 |
| Unpeeled chips | 23 |
| Other Sales | 0 5 |
| Sawdust | |
| Sawdust | 1 0 |
| Peeled Chips | 0 |
| Unpeeled chips | 0 |
| Firewood | 4 |
| Other | 0 |
| Sold as bark | 0 |
| Burnt for heat | 0 |
| Disposed rubbish/burning | 0 |
| Disposed rubbish/burning | U |

¹ Size category is based on total production of mill (softwood and hardwood), not just hardwood production

Additional Facilities of Mills

Of the (rated up) total of 78 mills, the number with each of the additional facilities is shown below (treating non-response to this question as "no"). Capacity and throughput for machine strength grading and kiln drying used 1998 responses where available for non-respondents in 2000, and were estimated for other mills by rating up respondents' figures by the same factor used to rate up softwood production for each size category (as described in Appendix 1).

Capacity and throughput of machine strength grading and kiln drying have increased since 1998. Machine strength grading capacity was 591,00m³ sawnwood (523,000) and throughput 391,000m³ sawnwood (321,000). Kiln drying capacity was 586,000m³ sawnwood (479,000) and throughput 422,000m³ sawnwood (344,000). Other facilities were at similar levels to 1998.

Table 13: Additional facilities of mills (2000 - mills with over 5,000m³ production): country breakdown

| | N | Number of mills | | |
|------------------------------------|----|-----------------|-----------------|--|
| | GB | Scotland | England & Wales | |
| Total number of mills | 78 | 29 | 49 | |
| Debarker | 57 | 24 | 33 | |
| Log sorter | 31 | 16 | 15 | |
| Drop sorter | 17 | 12 | 5 | |
| Automatic sticker/stacker | 21 | 14 | 7 | |
| Additional resawing/cross-cutting | 76 | 27 | 49 | |
| Machining (e.g. planing, moulding) | 36 | 12 | 24 | |
| Treatment plant | 46 | 19 | 27 | |

| | GB | Scotland | England & Wales |
|---------------------------------|-----|----------|-----------------|
| Machine strength grading | | | |
| Number of mills | 15 | 10 | 5 |
| Capacity (000m ³) | 591 | 386 | 205 |
| Throughput (000m³) | 391 | 244 | 147 |
| Kiln Drying | | | |
| Number of mills | 23 | 8 | 15 |
| Capacity (000m ³) | 586 | 398 | 188 |
| Throughput (000m ³) | 422 | 259 | 163 |

Employment

The numbers of direct employees and of contractors and subcontractors are shown below, rated up according to the number of mills responding in each size category. Employment is expressed in full time equivalents; e.g. someone who works for the sawmill half the time is recorded as 0.5.

The total employment figures are similar to those from 1998, but with indications of some increase in the proportion of work done by contractors. Total employment was 4,238 (4,195) full time equivalents, of which 3,580 (3,682) were direct employees and 658 (513) contractors or sub-contractors. Contractors or sub-contractors accounted for over three-quarters of the employment on haulage, but only 2% of sawmill line workers and secondary process workers.

Table 14: Sawmill Employment (2000 - mills with at least 5,000m³ production)

| | Direct | Contract | Total |
|---------------------------|--------|----------|-------|
| Sawmill line workers | 1,438 | 35 | 1,473 |
| Secondary process workers | 1,093 | 17 | 1,110 |
| Others (e.g. fitters) | 293 | 33 | 326 |
| Haulage to mill | 83 | 262 | 345 |
| Haulage from mill | 79 | 295 | 374 |
| Clerical staff | 209 | 4 | 213 |
| Marketing & sales staff | 105 | 7 | 112 |
| Supervising & managerial | 279 | 6 | 285 |
| Total | 3,580 | 658 | 4,238 |

Table 15: Sawmill Employment (2000 – mills with at least 5,000m³ production): country breakdown

| | Scot | Scotland | | & Wales |
|---------------------------|--------|----------|--------|----------|
| | Direct | Contract | Direct | Contract |
| Sawmill line workers | 551 | 5 | 887 | 30 |
| Secondary process workers | 312 | 2 | 781 | 15 |
| Others (e.g. fitters) | 127 | 9 | 166 | 24 |
| Haulage to mill | 32 | 92 | 51 | 170 |
| Haulage from mill | 23 | 111 | 56 | 184 |
| Clerical staff | 68 | 0 | 141 | 4 |
| Marketing & sales staff | 28 | 0 | 77 | 7 |
| Supervising & managerial | 108 | 0 | 171 | 6 |
| Total | 1,250 | 219 | 2330 | 439 |

SURVEY METHODOLOGY

2000 Annual Survey Responses

For the 2000 Survey 374 questionnaires were sent out in February 2001. Following a reminder and a telephone call to the largest non-respondents, 193 responses were received, a response rate of 52%. Of the 374 mills for which questionnaires were sent out, 77 mills either reported that they had closed or sawn no British timber, or the questionnaire was returned as "gone away", or the follow-up survey of Forest Enterprise district offices reported that the mill had closed This leaves 297 mills that are now thought to be in the scope for the survey (mills sawing British logs).

The following table shows the number of responses and non-respondents, for these 297 mills. Because of the much higher response rate from large mills, the respondents are estimated to have represented nearly 72% of total softwood consumption and 45% of total hardwood consumption.

| | Size category (000 m ³ production) | | | | |
|----------------------------------|---|--------|-------|-----|-------|
| | <1 | 1 - <5 | 5-<25 | 25+ | Total |
| Responses in scope | 64 | 49 | 24 | 19 | 156 |
| Non-respondents in scope | 55 | 51 | 29 | 6 | 141 |
| Total in scope | 119 | 100 | 53 | 25 | 297 |
| Response rate for those in scope | 54% | 49% | 45% | 76% | 53% |

Detailed Survey Responses and Rating Factors

Any detailed questionnaires completed for mills that produced less than 5,000 m³ sawnwood were excluded from the detailed survey analysis. Of the estimated 78 (79) mills producing over 5,000 m³ sawnwood, 40 (52) completed a detailed questionnaire, a response rate of 51% (66%). The response rate was worse than in 1998 for all size categories, dropping below 30% for the smallest category. The response rate based on number of mills for each size category is shown below.

| | Size category (000 m ³ production) | | | | |
|--|---|----------|----------|------|-----------|
| | 5 - < 10 | 10 - <25 | 25 - <50 | 50+ | Total |
| Mills completing detailed questionnaire for 2000 | 10 | 11 | 8 | 11 | 40 |
| Mills with data estimated from 1998 response | 9 | 3 | 3 | 2 | 17 |
| Other mills | 16 | 4 | 1 | 0 | 21 |
| Total | 35 | 18 | 12 | 13 | 78 |
| Response rate (2000) | 29% | 61% | 67% | 85% | 51% |
| Response for 2000 or 1998 | 54% | 78% | 92% | 100% | 73% |

In all paragraphs and tables produced only from the detailed (blue) questionnaire, data reported by the 40 respondents were rated up to give estimates for all 78 mills producing over 5000 m³ sawnwood. Because of the low response rate for 2000, we used data from 1998 for those who had responded for 1998 but not for 2000. Of the 38 non-respondents, 17 had reported data for 1998, and we estimated their data for 2000 to be the same as for 1998 except that consumption and production were adjusted to agree with any data reported in the 1999 Annual Survey. This provided data or estimates for 73% of the 78 mills, responsible for 92% of their total softwood consumption.

To compensate for all other non-respondents, we applied rating factors to the total data (responses and extrapolations from 1998) to give the same totals of mills, consumption and production as in the 2000 Annual Survey, using separate rating factors for each of the four size categories and England & Wales and Scotland.

Capacity and consumption were rated up by factors based on consumption, with separate factors for hardwood and softwood. Production and co-products were rated up by factors based on production, again with separate factors for hardwood and softwood. Responses to all other questions were rated up by factors based on the number of mills.

| APPENDIX 2 | | | | |
|------------|--|--|--|--|
| | | | | |

Ref

FORESTRY COMMISSION ADVISORY PANEL SUB-COMMITTEE ON SUPPLY AND DEMAND

SAWMILL SURVEY - FOR YEAR ENDING DECEMBER 2000

| 1. THE SAW | MILL: Please tick either A, B or C |
|------------|--|
| A | This sawmill no longer exists. Please ignore the enclosed questionnaires - just return this form, and if possible give the approximate date of closure in this box. |
| В | The sawmill had total sawnwood production (British and imported timber) of up to 5000 cubic metres during the year ending December 2000. Please just fill in the short (yellow) questionnaire, and return it with this form. |
| С | The sawmill had total sawnwood production (British and imported timber) of more than 5000 cubic metres during the year ending December 2000. Please answer the full (blue) questionnaire about the sawmill, and return it with this form. |
| | If you are unable to provide exact figures then estimates are acceptable. |
| 2. OTHER A | CTIVITIES |
| | any is a round fencing manufacturer, using British timber, and you have not received an FCAP onnaire, please tick this box. |
| | ny also harvests softwood timber from private estates, please tick this box he approximate quantity harvested in 2000, in green tonnes. |
| | Quantity green tonnes |
| | |

Please return this form and the appropriate questionnaire in the Freepost envelope provided, addressed to Statistics Branch, Forestry Commission, Freepost, Edinburgh, EH12 0PD.

| Ref | | |
|-----|--|--|
| | | |

SAWMILLS - 2000 : SHORT QUESTIONNAIRE - FOR MILLS PRODUCING UP TO 5000 m³

Mills with production of more than 5000 m³ are requested to complete the full (blue) questionnaire instead of this short (yellow) questionnaire.

UNITS USED

For consumption of logs, you can give volumes in metric units (cubic metres underbark, m³ ub) or in imperial units (hoppus feet, Hft), or figures in tonnes. For production of sawnwood, you can give figures in cubic metres (m³) or cubic feet (cu ft). **Please indicate which units you are using by circling the appropriate units.**

CONSUMPTION OF LOGS

Q1. What was the total consumption of British and imported logs in the year ending December 2000? (This should be the volume sawn in the year rather than the volume purchased or delivered in the year).

| | Softwood | Circle units used | Hardwood | Circle units used |
|---------------|----------|----------------------|----------|----------------------|
| British logs | | m³ ub | | m³ ub |
| | | or Hft | | or Hft |
| Imported logs | | or tonnes | | or tonnes |

PRODUCTION OF SAWNWOOD

Q2. What was the total volume of sawnwood produced by the mill in the year ending December 2000, from British and imported logs?

| | Softwood | Circle units used m ³ | Hardwood | Circle units used m ³ |
|----------|----------|------------------------------------|----------|--|
| Sawnwood | | or | | or |
| | | cu ft | | on ft |

STOCKS OF SAWNWOOD

Q3. What was the total volume of sawnwood held at the mill at the end of December 2000?

| | Softwood | Circle units used m ³ | Hardwood | Circle units used m ³ |
|-----------------|----------|------------------------------------|----------|---|
| Sawnwood stocks | | or | | or |
| | | cu ft | | ☐ cu ft |

Thank you for completing this questionnaire. Please return it with the white form, in the Freepost envelope provided, addressed to Statistics Branch, Forestry Commission, Freepost, Edinburgh, EH12 0PD.

NO

SAWMILLS - 2000: FULL QUESTIONNAIRE - FOR MILLS WITH PRODUCTION MORE THAN 5000 m³

| - FOR MILLS WITH PRODUCTION MORE THAN 5000 m | | | | |
|--|----------------------------|----------------|-----------------------------|--|
| If production is less than 5000 m ³ , please discard this questionnaire, and just complete the short (yellow) questionnaire. | | | | |
| UNITS USED For quantities in the questionnaire, you can give feet and cubic feet). Please indicate which unit you do this then there is no need to circle the un | ts you will be using, by c | ircling the ap | | |
| | Imperial (Hft and cu ft) | 2 | | |
| 1. WORKING HOURS IN 2000 | | | | |
| a. Number of days the mill operated in 2000 | | | days | |
| b. Average number of hours per day the mill | operated | | hours/day | |
| 2. ESTIMATED CAPACITY What is the annual capacity of the mill? Annual on single-shift working, given all the circumstant | | | that the site could sustain | |
| | Softwood | | | |
| | Hardwood | | | |
| 2a. Could the site sustain double-shift or concapacity would not be hindered by restrictions in planning controls. Please circle "Yes" or "No" | | | | |
| 3. MAXIMUM LOG SIZE What is the maximum butt diameter of log ye | ou can cut? | | | |
| | Softwood | | cm | |
| | Hardwood | | cm | |
| | | | | |

4. LONG LENGTH LOGS

Do you convert long length logs into shorter lengths before primary breakdown?

Please circle "Yes" or "No" YES

5. CONSUMPTION OF LOGS

What was the total consumption of British and imported logs in the year ending December 2000?

(This should be the volume sawn in the year rather than the volume purchased or delivered in the year. Please give **underbark** volume. If the size breakdown is not known, then an estimate is acceptable.)

| a. Softwood Total volume | | | | m ³ or Hft |
|--|------------------------|--------------------------------|-------------------------------|------------------------|
| of which: | - 16 cm and over top d | liameter (underbark) | | m ³ or Hft |
| | | | | |
| | - under 16 cm top diar | meter (underbark) | | m ³ or Hft |
| b. Hardwood Total volume | | | | m ³ or Hft |
| of whi | | | | 3 |
| - | 40 cm and over top dia | ameter (underbark) | | m ³ or Hft |
| - | under 40 cm top diame | eter (underbark) | | m ³ or Hft |
| 6. SOURCE OF LOG | | | | |
| Approximately what | % of softwood logs and | l what % of hardwo Softwood | od logs come from Hardwood | : |
| Engl | - u d | % | % | |
| Engla | | % | % | |
| Wale | es . | | | |
| Scotl | and | % | % | |
| Other | r Countries | % | % | |
| | Total | 100 % | 100 % | |
| 7. SPECIES OF WOO For softwood logs and a. Softw | l hardwood logs, pleas | e give the estimated p | percentage repres | ented by each species. |
| | Spruce | | % | |
| | Pine | | % | |
| | Other conifers | | % | |
| | | Total | 100 % | |
| b. Hardy | voods | | | |
| | Oak | | % | |
| | Ash | | % | |
| | Beech | | % | |
| | Sycamore | | % | |
| | Elm | | % | |
| | Other white ha | rdwoods | % | |
| | Other hardwoo | ds | % | |

Total

100 %

| should be excluded from figures for consumption and <i>Please circle "Yes" or "No"</i> | | YES | NO |
|---|---------------------------|-----------------------------|-------------------------|
| 9. PRODUCTION OF SAWNWOOD What was the total volume of sawnwood produced British and imported timber? | by the mill in th | e year ending | December 2000, from |
| | Softwood | Hardwood | |
| Total volume produced | | | m ³ or cu ft |
| 10. TYPES OF PRODUCT Market classification: Please give the percentage of markets. | sawnwood prod Softwood | duction going t Hardwood | o each of the following |
| a. Construction (including agricultural buildings) | % | % | |
| b. Fencing | % | % | |
| c. Package and pallets | % | % | , |
| d. Sawn mining timber | % | % | , |
| e. Furniture | % | % | , |
| f. Other | % | % | , |
| | 100 % | 100 % | |
| | | | |
| 11. STOCKS OF SAWNWOOD What was the total volume of sawnwood stocks held | at the mill at th | o and of Decem | har 2000? |
| vi nat was the total volume of savinwood stocks neid | | | DC1 2000. |
| | Softwood | Hardwood | |
| Total volume of sawnwood stocks | | | m ³ or cu ft |

12. ADDITIONAL FACILITIES OF THE SAWMILL

| Does the mill have any of the following facilities? Plea | ase circle YES or NO for each. |
|--|--------------------------------|
|--|--------------------------------|

| YES | NO |
|-----|-----------------|
| YES | NO |
| | YES YES YES YES |

For the following facilities, please circle YES or NO. If YES, please also show the annual capacity and actual throughput in 2000.

| | | Annual Capacity | Actual throughput | |
|-----------------------------|--------|--------------------|----------------------|-------------------------|
| h. Machine strength grading | YES NO | | | m ³ or cu ft |
| i. Kiln drying | YES NO | | | m ³ or cu ft |

13. EMPLOYMENT

Please provide estimates of the numbers of employees and contractors paid by the sawmill, for each of the categories shown below, split between direct (those for whom you are responsible for paying wages and National Insurance contributions) and contract (any others undertaking work for you).

Please do not any include staff at the site whose work is not directly related to the sawmill (e.g. exclude anyone producing pallets or other wood products from sawnwood). Please include a rough estimate of time for those who work a part-year for the sawmill (e.g. count a full-time employee working slightly more than half the time for the sawmill as 0.6, or an employee who works part-time for 4 months as 0.2).

Direct

Contractors &

| | Direct | Contractors & |
|-----------------------------------|-----------|-----------------|
| | employees | sub-contractors |
| Sawmill line workers | | |
| Secondary process workers | | |
| Others (e.g. fitters) | | |
| Haulage of timber to the mill | | |
| Haulage of products from the mill | | |
| Clerical staff | | |
| Marketing and sales staff | | |
| Supervising/managerial | | |
| | | |

14. CO-PRODUCTS

What quantities of co-products were produced in the year ending December 2000? This should include all co-products from the site, including those from secondary processing (additional resawing, cross-cutting and machining) and from processing of rough-sawn timber received at the site.

Please give quantities in green tonnes.

| | | Softwood | Hardwood |
|---|----------------------------------|----------|----------|
| a. Sold to woo | d processing industries | | |
| | Sawdust | | |
| | Slabwood | | |
| | Peeled Chips | | |
| | Unpeeled Chips | | |
| | Other | | |
| | | | |
| b. Other sales | , including those to agriculture | | |
| | Sawdust | | |
| | Slabwood | | |
| | Peeled Chips | | |
| | Unpeeled Chips | | |
| | Firewood | | |
| | Other | | |
| | | | |
| c. Sold as bark | | | |
| | | | |
| d. Burnt for heat | | | |
| | | | |
| e. Disposed of by burning or as rubbish | | | |
| | | | |

Thank you for completing this questionnaire. Please return it with the white form, in the Freepost envelope provided, addressed to Statistics Branch, Forestry Commission, Freepost, Edinburgh, EH12 0PD.