

12 Table T12 – Non-wood forest products removals and value of removals

12.1 FRA 2010 Categories and definitions

Term	Definition
Non-wood forest product (NWFP)	Goods derived from forests that are tangible and physical objects of biological origin other than wood.
Value of NWFP removals	For the purpose of this table, value is defined as the market value at the site of collection or forest border.

NWFP categories

Category
<p><u>Plant products / raw material</u></p> <ol style="list-style-type: none"> 1. Food 2. Fodder 3. Raw material for medicine and aromatic products 4. Raw material for colorants and dyes 5. Raw material for utensils, handicrafts & construction 6. Ornamental plants 7. Exudates 8. Other plant products <p><u>Animal products / raw material</u></p> <ol style="list-style-type: none"> 9. Living animals 10. Hides, skins and trophies 11. Wild honey and bee-wax 12. Wild meat 13. Raw material for medicine 14. Raw material for colorants 15. Other edible animal products 16. Other non-edible animal products

12.2 National data

12.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Jenny Wong (personal communication, 2004)	M/L	All others	2000	Compilation for FRA 2005, using sources identified below
Roger Hay, British Christmas Tree Growers Association (personal communication, 2005)	M	Christmas trees	various 1990 to 2004	
Forestry Statistics 2004	M	Christmas trees	96/97 to 03/04	Data for state forest service sales only.

The estimates provided by Jenny Wong (personal communication, 2004) were based on an assessment of the following sources:

- Dyke A. and Primrose D. (2002) Non-timber forest product study. Scottish Forest Industries Cluster.
- Murray M. and Simcox H. (2003) Use of wild living resources in the United Kingdom – A review. UK Committee for IUCN.
- Prendergast H.D.V. and Sanderson H. (2004) Britain’s wild harvest. Royal Botanic Gardens, Kew.
- Sanderson H. and Prendergast H.D.V. (2002) Commercial uses of wild and traditionally managed plants in England and Scotland. Royal Botanic Gardens, Kew.
- Wong J. and Dickinson B. (2003) Current status and development potential of woodland and hedgerow, Wild Resources Limited, Bangor.

12.2.2 Classification and definitions

National class	Definition
Venison	Meat from deer. The data used here are from deer culls, so exclude farmed deer.
Christmas trees	All conifers sold as Christmas trees. Most are from Christmas tree plantations managed by specialist Christmas tree growers and state forest services, not from general woodland.

12.2.3 Original data

Plant products

Christmas trees

- A study by Interviewing Research Ltd for BCTGA in 1997 (published 1998) estimated 6 million trees sold, of which 1-1.5 million imported.
- The latest estimate for 2004 (from BCTGA) is 7.5 million trees sold (including around 1 million imports).
- BCTGA estimate that UK production in 1990 was around 2.5 million trees.
- Figures for sales of Christmas trees by state forest services (FC and FS) are reported in Forestry Statistics 2004, table 2.14. They average around 160,000 trees for 1996-1998, and around 70,000 trees since 2000. These figures are not used here to estimate trends in quantities sold, because they only make up a small part of the total market.

Typical retail and wholesale prices in 2004, for a 6ft (1.8m) tree, estimated by BCTGA:

	Retail	Wholesale
Norway spruce	£12 - £20	£4 - £6
Firs	£22 - £35	£6 - £12
Pine	£23 - £30	£5 - £8

All other estimates are taken from Wong 2004 (personal communication) and are shown below. They can generally be taken as relating to the year 2000, except where other dates are stated.

Plant products – food

The most important products are Mushrooms (*Boletus*, *Chanterelle* etc.), Berries (*Vaccinium*, *Rubus*) and Flowers (*Sambucus nigra*).

Estimates (commercial collection only)

Product	Weight	Unit	Total value
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	(tonnes)	price (£ kg ⁻¹)	£
Commercial			
Nettles	2.5	9	22,500
Bilberries	4.0	4.0	16,000
Elderflowers	100.0	2.6	260,000
Mushrooms	50.0	7.5	375,000
Oak leaves	5.0	?	
Sloes	0.9	0.27	243
TOTAL	162.4		677,743

A price of £7.90/kg for bilberries is given in the sources quoted, but seems to be a retail price. In the above table this has been adjusted down by 50% to £4.00/kg as an estimated wholesale price.

Plant products – fodder

Occasional use in hard winters (*Corylus avellana*, *Ilex*, *Salix* etc.)

Plant products – medicines and aromatic products

Yew clippings (*Taxus baccata*) – estimate 15 tonnes and £5,000.

Plant products – colorants and dyes

The only information available is for oak tan bark (*Quercus petraea* & *Q. robur*) for a tannery in Devon (SW England). The estimated quantity is 13.5 tonnes; the price is not known.

Plant products – utensils, handicrafts and construction

Mainly willow (*Salix* spp.). Products include coppice and other wood for greenwood working as well as twigs for bessoms and rushes etc for basket weaving. There are few figures for the volume of this market but it is likely to be reasonably large. This is currently excluded from the table.

Ornamental plants

In addition to Christmas trees (see above) this includes any material collected for ornamental use, e.g. foliage and moss for use by florists and horticultural products (hanging baskets, wreaths etc.). Includes Moss (*Hypnum jutlandicum*, *Sphagnum*, *Hylocomium splendens*, *Pleurozium schreberi* etc.). Estimate 45 tonnes and value £4.1 million.

Exudates

Mainly Birch sap (*Betula* spp.) – no estimate available.

Other plant products

The estimate is for tree seed – 13 tonnes, value £150,000.

Animal products

Honey

Honey is derived from hedgerow trees such as hawthorn, lime etc. and understory wildflowers. Annual honey production estimated at 4000 tonnes per year for 2000 and 6000 tonnes for 2003-4. Beeswax represents 1.5% of the honey harvest [Carreck & Williams (1999) <http://www.beefarmers.co.uk/files/vofbeesreport.pdf>]. An educated guess puts the amount of honey harvested from forests and trees (in hedgerows) at around 3% of the total harvest, so about 200 tonnes for 2005. The advent of Varroa in 1995 severely affected honey production and the increase from 2000 to date probably represents recovery as bee farmers adjust to Varroa losses and control measures.

Average wholesale price of UK sourced honey: £4.40 per kg in 2000 and £4.00 per kg in 2004.

Venison (deer meat)

Estimated figures derived from data for deer culls:

1990: 800 tonnes, 2000: 2600 tonnes, 2005: 3500 tonnes

It is assumed that all culled deer are dependent on woodland for at least some of the year.

The estimated wholesale value for total deer cull, including that not sold:

1990: £0.8 million, 2000: £2.6 million, 2005: £3.5 million (all valued at £1/kg).

Other wild game from woodlands such as woodcock and wood pigeon are taken in relatively large numbers but contribute little to the overall weight produced and their meat is very low value, so they have been omitted. Reared woodland game i.e. pheasant have been excluded.

12.3 Analysis and processing of national data

12.3.1 Estimation and forecasting

For Christmas trees in 2005, use BCTGA estimate of total sold in 2004 (7.5 million) and subtract 1 million for imports, to get estimate of 6.5 million UK production. Use £8/tree as an average wholesale value, based on average of the range of original data for 2004.

For venison, original data give estimates for all years including 2005. For all other categories, assume same level in 2005 as in these earlier estimates.

12.3.2 Reclassification into FRA 2010 categories

No reclassification undertaken.

12.4 Data for Table T12

Rank	Name of product	Key species	Unit	NWFP removals 2005		NWFP category
				Quantity	Value (1000 local currency)	
1 st	Christmas trees	<i>Picea, Abies Pinus</i>	number	6500000	52000	6
2 nd	Foliage and moss	<i>Hypnum, Sphagnum, etc</i>	tonnes	45	4100	6
3 rd	Venison	<i>Cervus elaphus, Capreolus capreolus</i>	tonnes	3500	3500	12
4 th	Honey	<i>Bombus spp</i>	tonnes	200	800	11
5 th	Mushrooms	<i>Boletus, Cantharellus, etc</i>	tonnes	50	375	1
6 th	Elderflowers	<i>Sambucus nigra</i>	tonnes	100	260	1
7 th	Tree seed		tonnes	13	150	8
8 th	Nettles	<i>Urtica dioica</i>	tonnes	2.5	22	1
9 th	Yew clippings	<i>Taxus baccata</i>	tonnes	15	5	3
10 th	Bilberries	<i>Vaccinium myrtillus</i>	tonnes	4	4	1
All other plant products					0	
All other animal products					0	
TOTAL					61216	

	2005
Name of local currency	GBP

12.5 Comments to Table T12

Variable / category	Comments related to data, definitions, etc.
10 most important products	These are the 10 most important commercial products for which data are available. See other notes about non-commercial collection.
Other plant products	
Other animal products	
Value by product	
Total value	This is the total of commercial value of products identified in original data above. See general comment below on non-commercial collection, and also notes in original data about categories for which no data available.

Other general comments to the table

In addition to the commercial collection of plant food products shown here, there is believed to be substantial non-commercial collection of food products, particularly blackberries (*Rubus*) and wild mushrooms. One local rural survey estimated that on average each person collects 2.2kg of blackberries a year; applying this to the 2 million total rural population in UK gives a speculative estimate for blackberries of 4400 tonnes. If valued at around £3/kg (the typical wholesale market price in 2004), would give additional total value of around £13 million. It could be argued that non-commercial collection should be valued at the (higher) retail price, because that is the price the individuals would otherwise have to pay. This is excluded from the table, because the estimate is speculative, and we have no estimates (even speculative) for other food products.

No estimate is available for non-commercial collection of wild mushrooms. In a recent survey in Scotland about 4% of those interviewed said they had collected mushrooms at some time in the last 5 years, compared with about 13% who had picked berries at some time.