

## APPENDIX 1: GLOSSARY

**Age:** The ages of forest areas are as at 1 April of the survey year. A forest area is age one as at 1 April 2005 if it was planted in the preceding 12-month period; for example, between 1 April 2004 and 31 March 2005.

**Confidentiality:** Values are considered confidential if the number is made up of fewer than three contributors' information or where one owner's data makes up more than 80 percent of the value of that number. Forest owners are asked whether they are prepared to waive these strict confidentiality criteria in relation to the data they supply. If a number does not meet the confidentiality criteria and one of the contributors to the confidential number is not prepared to waive the confidentiality rules then that number is not published.

**Crop Type:** For the purpose of the NEFD, a crop type is defined as an aggregate of forest stands of the same species group and tending regime located within the same territorial authority area. The crop type definitions are mutually exclusive and include all planted forest areas.

### Land Cover Types:

- › "Improved pasture" is land that contains improved pasture species or has been fertilised.
- › "Scrub" is land predominantly covered in species such as bracken, gorse, manuka, kanuka or other woody plant species.
- › "Unimproved pasture" is land with no improved pasture species and which has not been fertilised.

**Net Stocked Forest Area:** The planted production forest area occupied by trees excluding mappable gaps such as landings, roads and other unstocked areas.

**New Planting:** The planting of trees for the primary purpose of producing wood or wood fibre, on land that has not previously been used for growing planted production forests.

**Planted Production Forest:** An area of trees, not less than one hectare in size, planted and managed with the intention of producing wood or wood fibre. In New Zealand almost all planted production forests are made up of introduced tree species.

The NEFD survey does not necessarily collect information on individual forests. Instead, it collects the forest area by crop type of all forests administered by each forest owner or manager.

**Restocking:** The replanting of a planted production forest area that has been clear felled.

### Rotation Number:

- › The first rotation is stands of forest planted on land not previously in forest.
- › The second and subsequent rotations are stands of forest growing on land from which a previous forest crop has been grown and harvested.

**Species Group:** Six groupings of tree species are used to describe the national planted production forest resource:

- › radiata pine (*Pinus radiata*);
- › Douglas-fir (*Pseudotsuga menziesii*);
- › cypress species;
- › other softwoods;
- › eucalyptus species;
- › other hardwoods.

Where a mixture of species is present the area is allocated to the crop type of the dominant species group.

**Stand:** A defined area of standing trees or forest, usually of one species, age and tending regime.

**Standing Volume:** The total volume (in cubic metres) of wood contained in stems of all age classes. The standing volume includes some non-recoverable volume, but excludes bark.

**Tending Regime:** Radiata pine has four tending regime categories, Douglas-fir two, and other softwoods and hardwoods are not assigned a tending regime.

The radiata pine tending regime categories are:

- › pruned with production thinning;
- › pruned without production thinning;
- › unpruned with production thinning;
- › unpruned without production thinning.

The Douglas-fir tending regime categories are:

- › with production thinning;
- › without production thinning.

The tending regime is based on the current management, or prior to application of tending, the intention to carry out pruning or production thinning.

Pruned refers to pruning carried out before age 12 so that more than 50 percent of the stems in the planned final crop stocking will contain a pruned butt log of not less than four metres in length.

Production thinning refers to the extraction of thinnings for commercial use. Stands that have been production thinned produce a smaller clear fell volume than stands that have not been production thinned.

**Territorial Authority:** District and city council areas adopted in October 1989 (see Table 7.1 and Figures 7.1 and 7.2 on pages 13–15).

**TRVIB:** An abbreviation for “Total recoverable volume inside bark”. This is the volume of wood recovered during harvesting, excluding bark, expressed in cubic metres.

**Wood Supply Region:** Zones in New Zealand where forest stands of the same species and tending regime are represented by the same generalised yield table. These

regions reflect wood supply processing catchments, and reconcile with aggregates of territorial authority units.

Ten regions were identified by the NEFD Steering Committee in 1989 (see Table 7.1 and Figures 7.1 and 7.2 on pages 13–15).

**Yield Table:** A tabular representation of forest yield in cubic metres per hectare. The yield table is expressed in terms of total standing volume, total recoverable volume and three log type volumes, together with any production thinning volumes by age (one to 80 years). There is a separate yield table for each crop type.

## APPENDIX 2: 2006 NEFD

## QUESTIONNAIRE

Only fill in data NOT included on the previous pages

## SECTION A: continued – Blank Form Area by age data as at 1 April 2005

1. Please answer (a) to (f). If you cannot give just one answer in each, you may need a separate sheet. If you are unsure, ring Survey Support on the number on the front cover.

(a) Local authority in which the forest is located

(b) Owner's name

(c) Rotation number (tick one circle only)

first rotation

second or subsequent rotation

(d) Species group (tick one circle only)

radiata pine → go to e     Douglas-fir → go to f     cypress species → go to 2     other softwoods → go to 2

eucalyptus → go to 2     other hardwoods → go to 2

(e) Radiata pine tending regime or intended tending regime (tick one circle only and then go to 2).

pruned with production thinning

pruned withOUT production thinning

unpruned with production thinning

unpruned withOUT production thinning

(f) Douglas-fir tending regime or intended tending regime

with production thinning

withOUT production thinning

2. Give the area in hectares of trees of each age, and the total area. Hectares may be given to the first decimal after the point.

year planted	age in 2005	net area (ha)	year planted	age in 2005	net area (ha)	year planted	age in 2005	net area (ha)	year planted	age in 2005	net area (ha)
2004	1		1983	22		1962	43		1941	64	
2003	2		1982	23		1961	44		1940	65	
2002	3		1981	24		1960	45		1939	66	
2001	4		1980	25		1959	46		1938	67	
2000	5		1979	26		1958	47		1937	68	
1999	6		1978	27		1957	48		1936	69	
1998	7		1977	28		1956	49		1935	70	
1997	8		1976	29		1955	50		1934	71	
1996	9		1975	30		1954	51		1933	72	
1995	10		1974	31		1953	52		1932	73	
1994	11		1973	32		1952	53		1931	74	
1993	12		1972	33		1951	54		1930	75	
1992	13		1971	34		1950	55		1929	76	
1991	14		1970	35		1949	56		1928	77	
1990	15		1969	36		1948	57		1927	78	
1989	16		1968	37		1947	58		1926	79	
1988	17		1967	38		1946	59		1925 or earlier	80+	
1987	18		1966	39		1945	60				
1986	19		1965	40		1944	61				
1985	20		1964	41		1943	62				
1984	21		1963	42		1942	63				
									<b>Total area</b>	<input type="text"/>	

## SECTION B: Planting and Harvesting

1. Between 1 April 2004 and 31 March 2005, did you carry out any planting or harvesting?

**yes**
 **no** →

go to  
SECTION C

You will need a separate sheet for each local authority in which you did any planting and harvesting. Please make as many copies as you need of the blank form below and fill them in. If you would like us to send you some additional copies please call Survey Support.

2. Local authority in which this forest is located.

3. **Planting**

Species	New area Give the area planted on a site not already in use for commercial forest growing	Area restocked Give the area of clear-felled planted production which was replanted plus areas naturally regenerating
Radiata pine	<input type="text"/> ha	<input type="text"/> ha
Douglas-fir	<input type="text"/> ha	<input type="text"/> ha
Cypress species	<input type="text"/> ha	<input type="text"/> ha
Other softwoods	<input type="text"/> ha	<input type="text"/> ha
Eucalyptus species	<input type="text"/> ha	<input type="text"/> ha
Other hardwoods	<input type="text"/> ha	<input type="text"/> ha
<b>Total</b>	<input type="text"/> ha	<input type="text"/> ha

4. Of the total new area planted, how much was planted on land which had been:

Scrubland  ha

Unimproved pasture  ha

Improved pasture  ha

*land predominantly covered in bracken, gorse, manuka, kanuka, or other woody species*

*land not fertilised, with no improved pasture species sown*

*land that has been fertilised and contains improved pasture species*

5. **Harvesting**

Note that 1 tonne = about 1 m<sup>3</sup>

Species	Area clear-felled	Clear-felled volume (recovered)	Average age clear-felled (area weighted)	Production thinning volume (recovered)
Radiata pine	<input type="text"/> ha	<input type="text"/> m <sup>3</sup>	<input type="text"/> years	<input type="text"/> m <sup>3</sup>
Douglas-fir	<input type="text"/> ha	<input type="text"/> m <sup>3</sup>	<input type="text"/> years	<input type="text"/> m <sup>3</sup>
Cypress species	<input type="text"/> ha	<input type="text"/> m <sup>3</sup>	<input type="text"/> years	<input type="text"/> m <sup>3</sup>
Other softwoods	<input type="text"/> ha	<input type="text"/> m <sup>3</sup>	<input type="text"/> years	<input type="text"/> m <sup>3</sup>
Eucalyptus species	<input type="text"/> ha	<input type="text"/> m <sup>3</sup>	<input type="text"/> years	<input type="text"/> m <sup>3</sup>
Other hardwoods	<input type="text"/> ha	<input type="text"/> m <sup>3</sup>	<input type="text"/> years	<input type="text"/> m <sup>3</sup>
<b>Total</b>	<input type="text"/> ha	<input type="text"/> m <sup>3</sup>	<input type="text"/> years	<input type="text"/> m <sup>3</sup>

6. Volume harvested by log grade (radiata pine ONLY)

Clear-felled volume **sold as**

pruned logs	unpruned sawlogs	pulp/chip logs	Total
<input type="text"/> m <sup>3</sup>	<input type="text"/> m <sup>3</sup>	<input type="text"/> m <sup>3</sup>	<input type="text"/> m <sup>3</sup>

7. Of the area clear-felled between 1 April 2004 and 31 March 2005, how much area will NOT be planted in the foreseeable future?

 ha

8. On 31 March 2005, what was the area awaiting replanting (ie, area clear-felled which you intend to replant but have not yet replanted)?

 ha

Go to SECTION C

## APPENDIX 3: THE NEFD

## STEERING COMMITTEE

The NEFD Steering Committee has been constituted by the New Zealand Forest Owners Association and the Ministry of Agriculture and Forestry to oversee the preparation of each edition of the National Exotic Forest Description. Members of the Steering Committee during the preparation of this report were:

MEMBER	NOMINATED BY
Steve Croskery Poyry Forestry Ltd	New Zealand Forest Owners Association
Judith Dennis Ministry of Agriculture and Forestry	Ministry of Agriculture and Forestry
John Dermer Farm Forestry Association	Ministry of Agriculture and Forestry
John Eyre Ministry of Agriculture and Forestry	Ministry of Agriculture and Forestry
Bridget Geard Ministry of Agriculture and Forestry	Ministry of Agriculture and Forestry
Chris Goulding New Zealand Forest Research Institute	Ministry of Agriculture and Forestry
Ian Hinton Kaingaroa Timberlands	New Zealand Forest Owners Association
Ross Jones Carter Holt Harvey	New Zealand Forest Owners Association
Paul Lane (Steering Committee Secretary) Ministry of Agriculture and Forestry	Ministry of Agriculture and Forestry
Paul Nicholls (Chairman) Rayonier New Zealand Ltd	New Zealand Forest Owners Association
Peter Oliver City Forests	New Zealand Forest Owners Association
Chas Perry Ministry of Agriculture and Forestry	Ministry of Agriculture and Forestry
Guy Sanders Statistics New Zealand	Ministry of Agriculture and Forestry
Bill Studholme <sup>1</sup> Studholme Forestry Limited	New Zealand Forest Owners Association

<sup>1</sup> Bill Studholme retired from the NEFD Committee in December 2006. He chaired the NEFD committee from 1998 until 2006.

The Steering Committee's terms of reference are included in Appendix 4.

## APPENDIX 4: THE NEFD STEERING COMMITTEE'S

# TERMS OF REFERENCE

The New Zealand Forest Owners Association and the Ministry of Agriculture and Forestry have agreed that the Steering Committee shall:

1. Produce a five-year strategic plan, which outlines long-term strategies to maintain the quality of planted production forest resource information collected and plans for projects of a longer-term nature such as wood supply forecasts. This strategic plan needs to be submitted through the Director-General of Agriculture and Forestry and the Board of the New Zealand Forest Owners Association.
2. Prepare an annual work plan and budget for NEFD activity, outlining details of statistics to be collected, how they are to be handled, the analysis to be performed and products to be produced during the year. This work plan is to be submitted through the Director-General of Agriculture and Forestry to the Board of the New Zealand Forest Owners Association by 31 May of each year (review and approval by the Director-General and the Board are required by 30 June of that year).
3. Prepare an annual report reviewing the year's work and achievements. This report is to be submitted to the Director-General of Agriculture and Forestry and to the Board of the New Zealand Forest Owners Association by 31 July each year.
4. Monitor user satisfaction with the NEFD outputs through the use of client surveys and through direct discussion with user representatives.
5. Advise the Ministry of Agriculture and Forestry Senior Management Team and the Forest Owners Association Board of any significant issues that the Steering Committee is unable to resolve.
6. Oversee the preparation of each edition of the *National Exotic Forest Description*.
7. Commission forecasts of future wood supply from New Zealand's planted production forests.
8. Ensure that all users are able to subscribe to NEFD reports on an equitable basis, with no barriers to access.
9. Advertise and promote the availability of NEFD reports.
10. Sponsor research by suitable bodies to improve the quality of NEFD information.

## APPENDIX 5:

## REFERENCES

AgriQuality New Zealand (2005) *Small Forest Grower Survey Report*.

Eyre, J (1995) Predicting and measuring new planting from nursery surveys. *New Zealand Journal of Forestry*, August 1995, pp 45–46.

Manley B; Somerville O; Turbitt M; Lane P (2003) Review of New Planting Estimates. *New Zealand Journal of Forestry*, November 2003, pp 34–37.

Ministry of Agriculture and Forestry (2005) *A National Exotic Forest Description as at 1 April 2005*.

Ministry of Agriculture and Forestry (2000) *NEFD National and Regional Wood Supply Forecasts 2000*.

Ministry of Forestry (1996) *A National Exotic Forest Description as at 1 April 1995*.

Ministry of Forestry (1996) *NEFD Regional Yield Tables as at 1 April 1995*.

New Zealand Forest Owners Association (2006) *New Zealand Forest Industry Facts & Figures 2006/2007*.

Statistics New Zealand (2002) *Agricultural Survey Results*.

## APPENDIX 6:

# FURTHER INFORMATION

The area and yield table databases and additional information are available from:

Paul Lane  
Ministry of Agriculture and Forestry  
PO Box 2526  
Wellington

Telephone: 64-4-894 0100  
Facsimile: 64-4-894 0741  
Email: stats\_info@maf.govt.nz

An electronic copy of this report is available on the New Zealand Ministry of Agriculture and Forestry's website: [www.maf.govt.nz/forestry](http://www.maf.govt.nz/forestry). The tables from this electronic report can be downloaded as Microsoft Excel files.

Area and yield data can be extracted from the NEFD databases for any combination of territorial authority area, species, silvicultural regime and age class. The Ministry of Agriculture and Forestry will provide such data on request, subject to its standard charging procedures. This information can be provided electronically or in printed form.

For reasons of confidentiality data on the resources of individual forest growers and data at a lower level of resolution than that published in this report will not be released without the prior written consent of the forest owner(s) concerned.

The Ministry of Agriculture and Forestry welcomes any comments on the presentation of this report. These can be directed to the MAF Policy's Innovation & Research Directorate, at the address above.

## APPENDIX 7:

# ACKNOWLEDGEMENTS

The Ministry of Agriculture and Forestry and the New Zealand Forest Owners Association wish to thank those forest owners, managers and consultants who provided data for the *2006 National Exotic Forest Description* survey.

