



National Exotic Forest Description

as at 1 April 2022



New Zealand
FARM FORESTRY ASSOCIATION



Acknowledgements

The Ministry for Primary Industries, the New Zealand Forest Owners Association, and the New Zealand Farm Forestry Association wish to thank those forest owners, managers and consultants who provided data for the 2022 National Exotic Forest Description survey.

Thanks also go to DJ Apparao, Matt Dilly, Clare Ferguson, Nicola Giles, Roxanne Martin and Kieran Parsons for their efforts preparing, coordinating and producing NEFD 2022. Thanks to the NEFD Steering Committee for technical advice and peer review.

Enquiries

The Ministry for Primary Industries welcomes any comments or queries on this report via NEFD@mpi.govt.nz

Published by
Ministry for Primary Industries
PO Box 2526
Wellington 6140 New Zealand
Phone: 0800 008 333
Web: www.teururakau.govt.nz

© Crown copyright – Ministry for Primary Industries

Edition 39

Publication date: 13 March 2023

ISSN: 1170-5191

Any table or other material contained in this report may be reproduced or published without further license provided that it does not purport to be published under Government authority, that it is not reproduced for profit and that its source is acknowledged.

Disclaimer

While every effort has been made to ensure the accuracy of the information contained in this publication, the Ministry for Primary Industries accepts no liability for any error or omission. The information does not necessarily represent the views of individual members of the National Exotic Forest Description Steering Committee, the Ministry for Primary Industries, Te Uru Rākau – New Zealand Forest Service, the New Zealand Forest Owners Association, or the New Zealand Farm Forestry Association.

Contents

Figures	iv
Tables	iv
Key facts as at 1 April 2022	1
Overview of the NEFD	4
What is the NEFD?	4
What does the NEFD report on?	4
Who participates in the NEFD?	4
Information on forests smaller than 40 hectares	4
Reliability of Data	4
Other sources of information	4
Who uses the NEFD?	4
Governance of the NEFD	4
What are New Zealand's wood supply regions?	5
What Planting and Harvesting information is collected?	5
Yield tables and Wood Availability Forecasts	5
Online resources	5
Area, Species Distribution, Standing Volume and Ownership of plantation forests in New Zealand	6
Area	6
Area Distribution by wood supply region	7
Species distribution by age classes	8
Silviculture	9
Standing Volume	9
Ownership	9
Harvesting	13
An estimate of total harvest volumes for New Zealand	13
Deforestation Intentions Survey	13
Wood Availability Forecasts	13
Planting	14
New planting	15
Nursery Survey	17
Forest area by age class and wood supply region	19
Appendix 1: Glossary	42
Appendix 2: NEFD Steering Committee's Terms of Reference	43
Appendix 3: NEFD Steering Committee	44
Appendix 4: References	45
Appendix 5: National Exotic Forest Description Technical Report	46

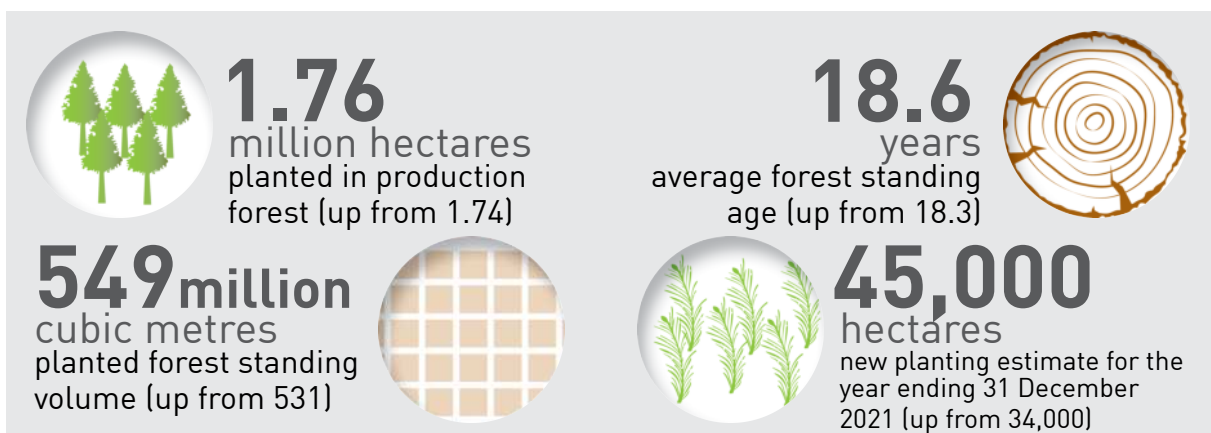
Figures

Figure 1: Forest area by annual age class	1
Figure 2: Wood Supply Regions and Territorial Authorities in New Zealand	3
Figure 3: Changes in planted production forest area in New Zealand	6
Figure 4: Distribution of forest area by wood supply region	7
Figure 5: Forest area by age class and wood supply region	8
Figure 6: Forest area by age class and species	8
Figure 7: Forest ownership	9
Figure 8: Species Distribution	9
Figure 9: Radiata pine by Tending Regime	9
Figure 10: Total planted production forest roundwood removals	13
Figure 11: Total planted area	14
Figure 12: Harvested forest awaiting either replanting or a land use decision	14
Figure 13: New Land Planted in Production Forest in New Zealand	15
Figure 14: Distribution of all species forest area by age class and island	21
Figure 15: Distribution of radiata pine forest area by age class and island	23
Figure 16: Distribution of Douglas-fir forest area by age class and island	25
Figure 17: Distribution of cypress species forest area by age class and island	27
Figure 18: Distribution of other softwoods forest area by age class and island	29
Figure 19: Distribution of eucalypts forest area by age class and island	31
Figure 20: Distribution of other hardwoods forest area by age class and island	33
Figure 21: Distribution of radiata pine pruned with production thinning forest area by age class and island	35
Figure 22: Distribution of radiata pine unpruned with production thinning forest area by age class and island	37
Figure 23: Distribution of radiata pine pruned without production thinning forest area by age class and island	39
Figure 24: Distribution of radiata pine unpruned without production thinning forest area by age class and island	41

Tables

Table 1: National exotic forest estate statistics	2
Table 2: Survey frequency and data quality by forest size	4
Table 3: Total Forest Area (ha)	6
Table 4: Forest area by annual age class	7
Table 5: Area, standing volume, and area-weighted average age by territorial authority	10
Table 6: Total area represented by each data source in the 2022 NEFD database	11
Table 7: Number of forest owners by national size class	12
Table 8: Forest area by forest owner national size class	12
Table 9: Land cover prior to new planting, year ending December	16
Table 10: Area planted in all species by territorial authority	20
Table 11: Area planted in radiata pine by territorial authority	22
Table 12: Area planted in Douglas-fir by territorial authority	24
Table 13: Area planted in cypress species by territorial authority	26
Table 14: Area planted in other softwoods by territorial authority	28
Table 15: Area planted in eucalypts by territorial authority	30
Table 16: Area planted in other hardwoods by territorial authority	32
Table 17: Area of radiata pine pruned with production thinning by territorial authority	34
Table 18: Area of radiata pine unpruned with production thinning by territorial authority	36
Table 19: Area of radiata pine pruned without production thinning by territorial authority	38
Table 20: Area of radiata pine unpruned without production thinning by territorial authority	40

Key facts as at 1 April 2022



New Zealand's net stocked planted production forest covered an estimated 1.76 million hectares as at 1 April 2022, an increase from 1.74 million hectares in 2021.

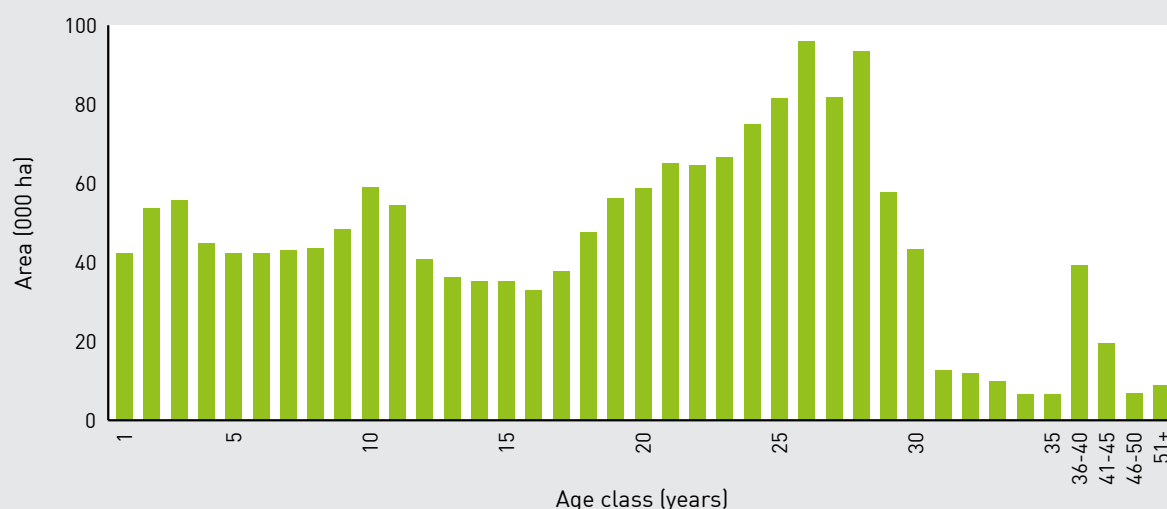
The total planted forest standing volume was estimated to be 549 million cubic metres with an average age (area weighted) of 18.6 years, an increase from 531 million cubic meters with an average age (area weighted) of 18.3 years in 2021.

The provisional new planting estimate for the year ending 31 December 2021 is 45,000 hectares, an increase from 34,000 hectares in 2020. This number may be revised in the 2023 NEFD. The new planting estimate comes from the nursery survey and may differ from the age class distribution figures.

Table 1 on the following page provides key national forestry statistics as at 1 April 2022, as well as the statistics for 2020 and 2021 for comparison.

The distribution of the forest area by annual age class is shown in Figure 1. The decrease in area as age increases beyond 28 years indicates harvesting. Of particular note is the large area of forest between 18 to 28 years old, planted between 1994 and 2004. This forest has begun reaching harvest age.

Figure 1: Forest area by annual age class¹



Note
1. The area is shown for each age in single years up to 35 years. After this, age classes are aggregated.

Table 1: National exotic forest estate statistics

Area and standing volume statistics	As at 1 April 2020	As at 1 April 2021 published ⁴	As at 1 April 2021 revised ⁷	As at 1 April 2022
Forest area				
Net stocked area (ha)	1,716,575	1,739,971	1,739,971	1,757,451
Harvested area awaiting restocking (ha)	54,380	45,487	47,700	50,221
Total forest area	1,770,955	1,785,458	1,787,671	1,807,672
Growth characteristics				
Standing volume (000 m ³)	512,403	531,395	531,395	549,385
Average standing volume (m ³ /ha)	299	305	305	313
Area-weighted average age (years)	18.1	18.3	18.3	18.6
Area by species²				
Radiata pine (ha)	1,545,102	1,571,574	1,571,574	1,587,466
Douglas-fir (ha)	102,236	97,584	97,584	100,105
Cypress species (ha)	10,034	9,970	9,970	9,057
Other softwoods (ha)	24,619	24,027	24,027	25,290
Eucalypts (ha)	21,757	21,950	21,950	22,035
Other hardwoods (ha)	12,827	14,866	14,866	13,498
Radiata pine area by tending regime				
Pruned with production thinning (ha)	138,754	136,898	136,898	137,640
Pruned without production thinning (ha)	537,733	520,952	520,952	509,959
Unpruned with production thinning (ha)	52,931	58,121	58,121	66,202
Unpruned without production thinning (ha)	815,684	855,602	855,602	873,666
Planting statistics				
	Year ended 31 December 2019	Year ended 31 December 2020 p	Year ended 31 December 2020 r	Year ended 31 December 2021
New planting³				
Total estimated new planting (ha)	19,000	34,000	34,000	45,000
Restocking (ha)	42,179	42,907	42,907	40,424
Harvesting statistics⁵				
	Year ended 31 March 2020	Year ended 31 March 2021 p	Year ended 31 March 2021 r	Year ended 31 March 2022
Harvesting				
Estimated planted forest roundwood removal (000 m ³) ⁶	34,441	34,383	34,264	34,401
Average harvest age - radiata pine (years)	29.1	28.5	28.5	27.8

Notes

1. In this report, the area of harvested land that was recorded as awaiting a land use decision has been reported in the area awaiting replanting.
2. Individual entries may not add to totals due to rounding. Detailed breakdowns can be found in the Forest area by age class and wood supply region section, page 19.
3. The forestry statistics released in this report, and in particular, new planting estimates, may differ from those produced in the Agricultural Production Survey by Statistics New Zealand. These surveys use different survey frames and designs. See Appendix 5 for the method used to estimate new planting for the NEFD.
4. The 2020 and 2022 survey sought data from owners with 40 hectares of forest or more.
5. All standing and harvest volumes are reported as recoverable volumes (see Appendix 1).
6. Estimate from the annual roundwood removal statistics.
7. The restocking area and area awaiting restocking does not include forests under 40 hectares, so please use these metrics with caution.

Overview of the NEFD

What is the NEFD?

The National Exotic Forest Description (NEFD) is a Tier 1 Statistic¹ with the purpose of maintaining an authoritative, high quality database of New Zealand's production forests. It has been published annually since 1985 and gives information on New Zealand's exotic planted production forest estate (i.e. exotic forest planted with the primary intention of producing wood or wood fibre).

What does the NEFD report on?

This report provides information that describes New Zealand's planted production forests. It consists of summarised statistics on:

- exotic planted production forest area by age class and territorial authority for key exotic species. For radiata pine, the area by age class tables are also provided by silviculture regime;
- standing volume (see Glossary: Appendix 1);
- national harvesting volume estimates;
- planting estimates for forests larger than 40 ha; and
- forest ownership for forests larger than 40 ha.

Who participates in the NEFD?

The NEFD surveys known forest owners and managers with at least 40 hectares of planted exotic production forest. The survey is run on a two-yearly cycle, where all known forest owners with 40 or more hectares of forest are surveyed one year (census), and the next year only owners with more than 1,000 hectares (sample).

In 2022 the survey commenced the process of allowing online data entry using digital maps to allow owners to identify their forests. This upgrade will take some time to fully implement and for forest owners to take full advantage of this approach.

Information on forests smaller than 40 hectares

The area for owners with less than 40 hectares is estimated using the 2004 AgriQuality Small Forest Growers (<40 ha) Survey, an imputation based on new planting from 1992-2006, and forests previously surveyed in the NEFD that have dropped below the 40 hectare area cut-off. The estimate is used because of limitations and practicalities of surveying the large numbers of small growers. More information on the methods used for these estimates and the accuracy constraints is in Glossary: Appendix 5.

Reliability of Data

The reliability of data decreases as forest sizes reduce. Forest owners of larger forests (1,000 or more hectares) generally have the systems to provide higher quality data compared to those with small forestry blocks. Work to improve the reliability of the NEFD data is underway. Resulting improvements to the data will be published in future NEFD reports.

Table 2: Survey frequency and data quality by forest size

Forest ownership size (hectares)	Survey Frequency	Data quality
1000ha or more	Annually	Good
999ha to 40ha	Every two years	Medium
Below 40ha	Infrequently	Low

For a detailed description of the methodology employed to collect the data, ensure reliability and to calculate imputations, please refer to Glossary: Appendix 5.

Other sources of information

In addition to the data collected in the surveys, the NEFD uses other government data sources where appropriate. For example, Emission Trading Scheme area and species data can be used instead of surveying with owner permission, and log and roundwood data collected by MPI provides a comparison for harvest volumes. For further information, please refer to the NEFD technical document Glossary: Appendix 5. In addition, roundwood removal data is validated against Forest Growers Levy data.

Who uses the NEFD?

The data collected in the NEFD is used to inform the forestry sector, the wood processing industry, and central and local government policymakers and planners about New Zealand's planted forest estate. The information also assists with international reporting obligations, and is the foundation for creating wood availability forecasts which identify wood processing opportunities in New Zealand.

Governance of the NEFD

Collection and publishing of NEFD information is overseen by the NEFD Steering Committee – a Forest Industry Committee with members nominated by the New Zealand Forest Owners Association, the New Zealand Farm Forestry Association, and the Ministry for Primary Industries. A full list of this committee can be found in Glossary: Appendix 3.

¹ Tier 1 statistics are the most important statistics in New Zealand, essential to understand how well New Zealand is performing and to inform critical decisions. For more information, see: www.data.govt.nz/catalogue-guide/showcase/official-statistics/

What are New Zealand's wood supply regions?

The NEFD groups the sixty-six District and City Councils within New Zealand into nine wood supply regions. These regions have broadly similar growth patterns for radiata pine, representing wood supply and processing catchments. The wood supply regions are: Northland, Central North Island, East Coast, Hawke's Bay, Southern North Island, Nelson and Marlborough, West Coast, Canterbury, and Otago and Southland (see Figure 2 on page 3).

What Planting and Harvesting information is collected?

Planting data is collected as at 31 December² on the area of replanting, afforestation, and land cover before afforestation. A supplementary survey of large forest owners and known afforesters is run at the end of a survey period to provide a provisional estimate of afforestation to the current year. In addition, the NEFD survey collects some data on harvesting from forests larger than 40 hectares including the average age of clear-felled radiata pine. NEFD harvesting information is combined with other MPI data sources to provide national harvest estimates.

Yield tables and Wood Availability Forecasts

The yield tables are produced periodically, based on data provided by forest owners and managers of larger forests, as part of the wood availability forecasts.

The yield tables contain yield aggregates of the same species group and tending regime, which are located in the same wood supply region. The yield tables contain the total recoverable volume by three log type volumes (pruned logs, unpruned logs and pulp logs), together with any thinning volume, by annual age class. Each yield table is labelled with a code that defines the wood supply region, species group and tending regime.

Yield tables and Wood Availability Forecasts for all regions and New Zealand are available on the Te Uru Rākau website (see below).

Online resources

An electronic copy of this report is available on the New Zealand Ministry for Primary Industries website: <https://www.teururakau.govt.nz/news-and-resources/open-data-and-forecasting/forestry/new-zealands-forests/>

The Te Uru Rākau website also has electronic copies of:

- the tables from the report;
- report and tables from the Wood Availability Forecasts; and
- yield tables.

For specialised requests please contact nefd@mpi.govt.nz.

For reasons of confidentiality, data on the resources of individual forest growers will not be released without the prior written consent of the forest owner(s) concerned.

Any other outputs will have standard confidentiality rules applied.

² 31 December is used as the year end as planting does not occur in January to March.

Area, Species Distribution, Standing Volume and Ownership of plantation forests in New Zealand

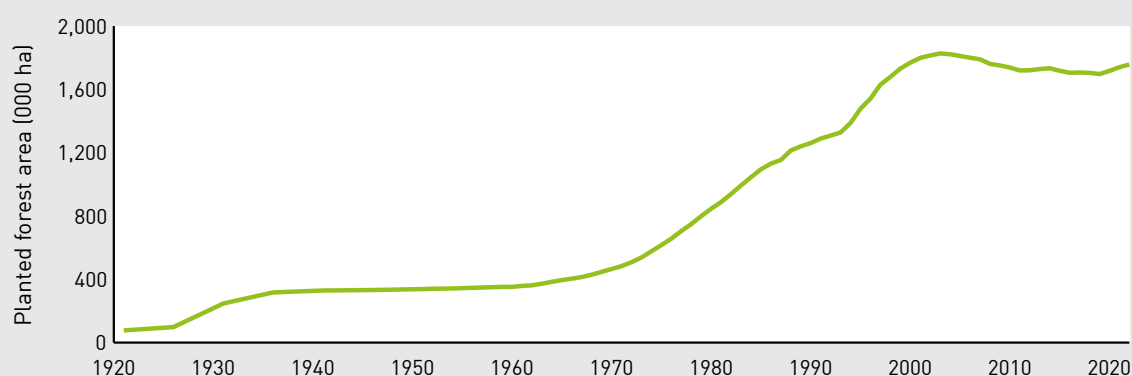
Area

As at 1 April 2022, the total net stocked area of planted forest was estimated to be 1.76 million hectares (Figure 3, Table 3). Including the area of land currently awaiting replanting after harvesting (50,221 hectares), makes the estimated total forest area 1.81 million hectares.

The 2021 net stocked forest area has been revised to 1.74 million hectares, due to new information including updated returns from respondents and amendments to historical data. Further details can be found in the NEFD online tables.

The area reported for 2022 was an increase of 17,480 hectares (1 percent) from the 2021 net stocked area of 1.74 million hectares. Year-on-year changes in the net stocked area can be caused by new information, updated returns from respondents, and changes in land use decisions by forest land owners.

Figure 3: Changes in planted production forest area in New Zealand



Note
1. Net stocked area is displayed in the Figure, area awaiting restocking is not included. For total production forest area, see Table 3.

Table 3: Total Forest Area (hectares), as at 1 April

	2017	2018	2019	2020	2021r	2022
Area awaiting replanting	48,470	50,072	52,041	54,380	47,700	50,221
Net stocked area	1,706,429	1,704,494	1,696,604	1,716,575	1,739,971	1,757,451
Total forest area	1,754,899	1,754,566	1,748,645	1,770,955	1,787,671	1,807,672

Notes

1. The area awaiting restocking does not include forests under 40 hectares, so please use this metric with caution.

The estimated known area of radiata pine increased by 15,892 hectares between 2021 and 2022. The increase was due to re-mapping of existing forestry (including from changes in ownership), and planting of additional forestry. Douglas-fir area increased by 2,521 hectares between 2021 and 2022. Other hardwoods decreased by 1,368 hectares between 2021 and 2022. Other softwoods increased by 1,263 hectares between 2021 and 2022. Cypress species showed minor decreases, consistent with year-on-year variation. Eucalypts showed minor increases, consistent with year-on-year variation.

Table 4: Forest area by annual age class as at 1 April 2022

Age	Area (ha)	Age	Area (ha)	Age	Area (ha)
1	42,319	28	93,424	55	312
2	53,696	29	57,748	56	431
3	55,758	30	43,274	57	580
4	44,725	31	12,796	58	879
5	42,312	32	11,943	59	198
6	42,230	33	9,783	60	307
7	42,994	34	6,645	61	195
8	43,680	35	6,513	62	540
9	48,295	36	9,519	63	127
10	59,098	37	10,523	64	166
11	54,557	38	8,058	65	113
12	40,792	39	6,283	66	105
13	36,161	40	4,829	67	62
14	35,143	41	4,599	68	128
15	35,161	42	5,066	69	88
16	33,035	43	3,569	70	109
17	37,814	44	4,083	71	26
18	47,595	45	2,244	72	393
19	56,250	46	1,853	73	301
20	58,802	47	1,942	74	49
21	64,987	48	1,379	75	43
22	64,453	49	940	76	17
23	66,625	50	845	77	18
24	74,914	51	566	78	65
25	81,492	52	1,110	79	6
26	96,055	53	788	80+	640
27	81,825	54	463		

Notes

1. This table excludes afforestation that was not directly captured by the NEFD survey.

Area Distribution by wood supply region

Figure 4: Distribution of forest area by wood supply region, as at 1 April 2022

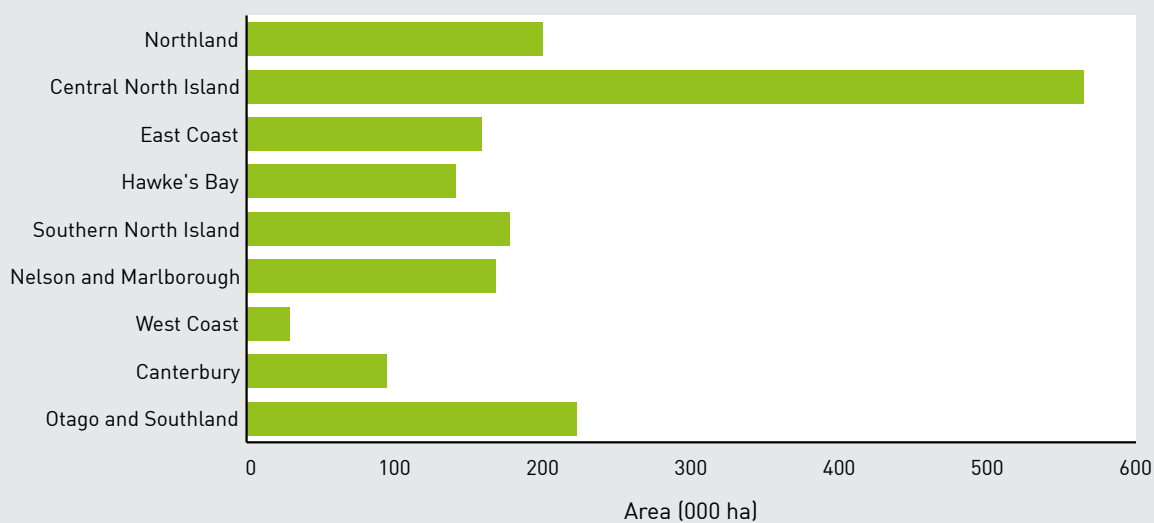


Figure 5: Forest area by age class and wood supply region, as at 1 April 2022

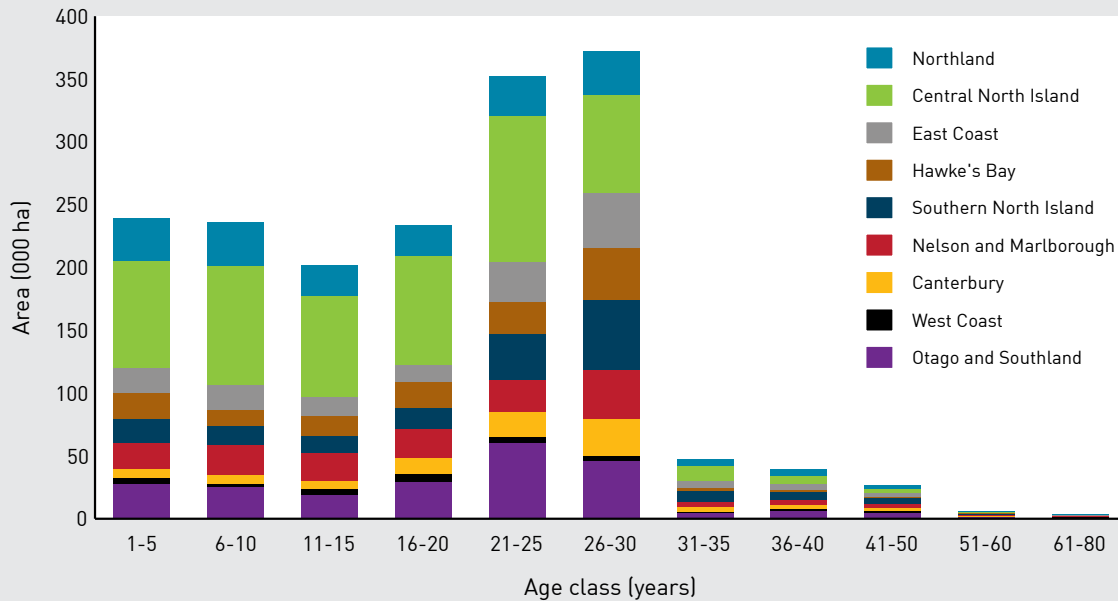
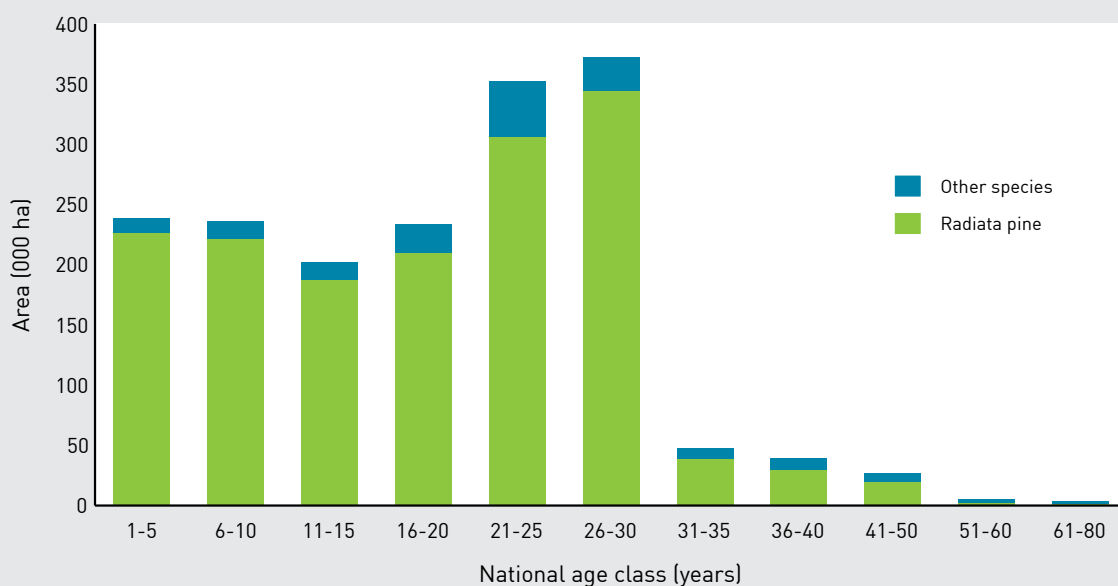


Figure 5 shows the distribution of forests across the nine wood supply regions in New Zealand by age class. The Central North Island has the largest area of forest across all age class groups. It accounts for around 36 percent (85,578 hectares) of the total forest in age class 1 to 5 years, and 32 percent (564,856 hectares) across all age classes.

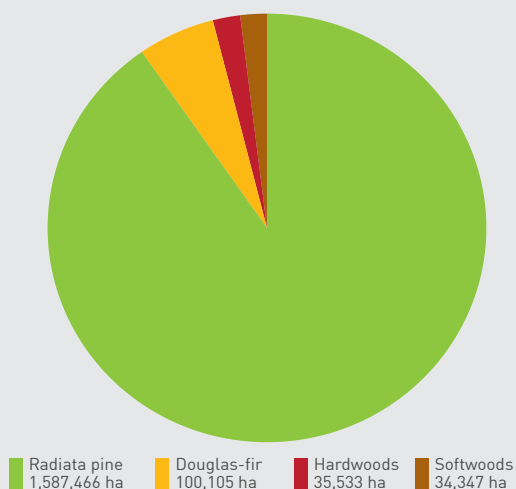
Species distribution by age classes

Figure 6: Forest area by age class and species, as at 1 April 2022



As seen in Figures 6 and 7, radiata pine is the dominant species, making up 90 percent of the planted production forest area in New Zealand. The proportion of Douglas-fir is higher in Otago and Southland (26 percent) and Canterbury (18 percent) compared to the national distribution (6 percent) as growing conditions are more suitable.

Figure 7: Species Distribution, as at 1 April 2022



Note: Softwoods includes cypress species, Hardwoods includes eucalypts.

Figure 8: Radiata pine by Tending Regime, as at 1 April 2022

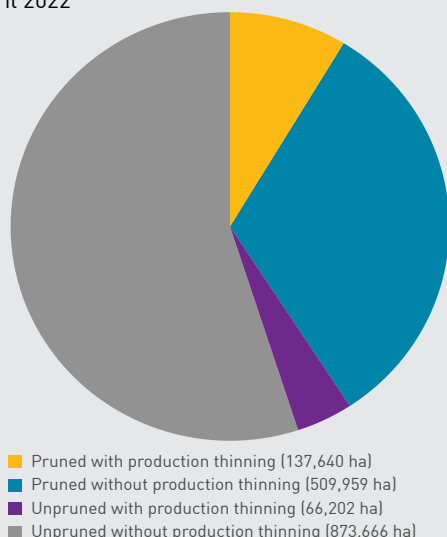
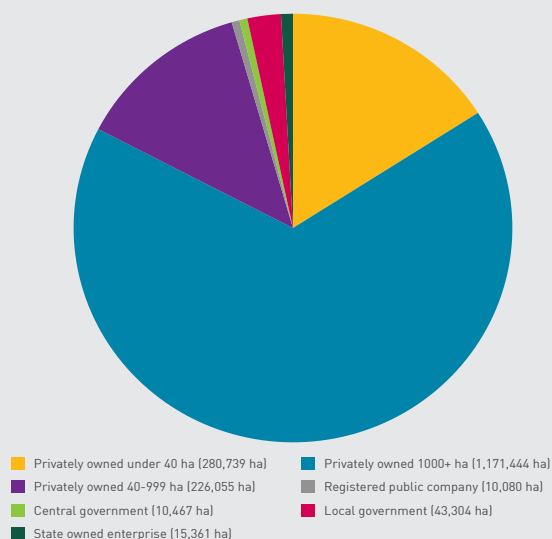


Figure 9: Forest ownership, as at 1 April 2022



Silviculture

Figure 8 indicates that about 41 percent (647,599 hectares) of the radiata pine planted forest estate is, or is expected to be, pruned to a height of at least four metres. This is a decrease from the previous year, and continuation of the general trend away from pruning.

The area of production forest that is, or is expected to be, thinned is unchanged from last year at 12.8 percent of the radiata pine planted forest (Figure 8). The proportion of production thinned forest is slightly higher in the North Island, with 13.9 percent (165,820 ha) production thinned, than in the South Island where 9.6 percent (38,022 ha) is production thinned. Generally, the area of production thinned forest has declined over the past decade. The area of radiata pine forest that is unpruned with no production thinning now makes up 55 percent of the radiata pine forest estate (873,666 ha), showing the trend towards minimally tended forests.

Standing Volume

The standing volume by Territorial Authority at 1 April 2022 is presented in Table 5 (see Appendix 1 for a definition of standing volume).

Ownership

In 2022, there were around 1,700 known forest entities with more than 40 hectares of forests. The vast majority (95 percent) owned between 40 and 999 hectares of forest, making up 14 percent of the National Forest Estate in 2022 (Table 6). In contrast, the 5 percent of owners with 1,000 or more hectares accounted for 70 percent of total exotic plantation forest estate in New Zealand.

The number of owners with fewer than 40 hectares is difficult to estimate, but is likely to be over 10,000. It is estimated these owners represent around 1 percent of total forest area. 1.7 million hectares, or 95 percent of New Zealand's exotic plantation forests, were privately owned as at 1 April 2022 (Figure 9).

Notes

- The area of forest owned or managed by major forest owners can be found in the New Zealand Forest Industry booklet, Facts & Figures 2021/22, page 13 (see the New Zealand Forest Owners Association website for more information).
- Ownership is based solely on the ownership of the forest irrespective of the ownership of the land.
- Figure represents percentage of net stocked planted production forest area by ownership type.
- Significant changes in forest ownership have occurred since 2003, resulting in large areas of forest previously owned by public companies now being privately owned.
- The legal entities included in the "Privately owned" category are private companies, partnerships, individuals and trusts, which includes Māori trusts and incorporations.
- "Central Government" forests are predominantly Crown-owned forests on Māori lease-hold land. These forests are managed by Crown Forestry.

Table 5: Area, standing volume, and area-weighted average age by territorial authority as at 1 April 2022

Territorial authority	Area (ha)	Standing volume (000 m ³)	Area-weighted average age (years)
Northland wood supply region			
Far North District	90,748	20,063	16.7
Whangarei District	32,288	7,278	16.8
Kaipara District	38,636	7,556	14.9
Auckland Council	38,358	11,325	20.4
Region total	200,030	46,222	17.1
Central North Island wood supply region			
Thames-Coromandel District	23,489	7,472	17.1
Hauraki District	3,584	1,668	21.5
Waikato District	17,282	7,666	20.9
Matamata-Piako District	1,681	654	19.7
Hamilton City	14	9	26.4
Tauranga District	106	63	27.3
Western Bay of Plenty District	21,661	7,819	18.4
Rotorua District	51,749	16,370	17.1
Kawerau District	576	31	5.3
Whakatane District	111,051	30,520	15.3
Opotiki District	13,647	3,496	15.2
Waipa District	2,376	1,162	23.2
Otorohanga District	5,041	2,436	22.3
Waitomo District	25,911	11,403	21.3
Ruapehu District	53,704	19,559	18.2
South Waikato District	59,701	17,966	15.5
Taupo District	173,283	46,278	15.1
Region total	564,856	174,573	16.5
East Coast wood supply region			
Gisborne District	158,546	59,568	20.0
Region total	158,546	59,568	20.0
Hawkes Bay wood supply region			
Wairoa District	61,212	22,284	17.8
Hastings District	63,451	23,725	18.4
Napier City	26	16	30.8
Central Hawkes Bay District	16,755	8,878	23.8
Region total	141,444	54,904	18.8
Southern North Island wood supply region			
New Plymouth District	4,689	1,916	21.8
Stratford District	6,986	2,856	23.6
South Taranaki District	9,701	4,788	24.8
Wanganui District	22,917	10,275	23.0
Rangitikei District	21,528	9,740	23.3
Manawatu District	7,099	3,575	25.4
Kapiti Coast District	3,073	1,643	26.3
Upper Hutt City	4,859	2,100	23.0
Porirua City	1,214	760	30.3
Wellington City	581	312	26.2
Lower Hutt City	229	159	34.4
Palmerston North City	2,975	941	17.6
Tararua District	20,284	7,220	20.0
Masterton District	37,925	13,272	19.9
Horowhenua District	8,977	3,652	21.3
Carterton District	14,174	5,303	20.6
South Wairarapa District	10,183	3,891	21.1
Region total	177,393	72,401	21.9
North Island total	1,242,269	407,667	18.1

Territorial authority	Area (ha)	Standing volume (000 m ³)	Area-weighted average age (years)
Nelson and Marlborough wood supply region			
Nelson City	9,227	2,617	17.1
Tasman District	82,875	24,312	17.8
Marlborough District	74,285	24,994	19.7
Kaikoura District	1,852	636	18.6
Region total	168,240	52,559	18.6
Canterbury wood supply region			
Hurunui District	34,705	10,246	21.5
Waimakariri District	8,343	3,180	23.9
Christchurch City	9,891	3,837	25.1
Selwyn District	10,244	3,151	21.5
Ashburton District	3,001	954	23.6
Timaru District	12,027	3,043	21.3
Mackenzie District	5,016	1,674	26.8
Waimate District	11,585	3,294	22.6
Region total	94,812	29,380	22.5
West Coast wood supply region			
Buller District	4,317	892	19.1
Grey District	13,948	2,726	17.2
Westland District	11,134	2,917	21.2
Region total	29,399	6,535	19.0
Otago and Southland wood supply region			
Waitaki District	23,941	5,536	18.9
Dunedin City	16,580	3,844	18.0
Queenstown-Lakes District	738	311	34.5
Central Otago District	7,056	1,795	24.0
Clutha District	87,471	20,476	19.5
Gore District	4,678	1,450	22.9
Southland District	81,423	19,608	19.7
Invercargill City	844	225	18.6
Region total	222,731	53,245	19.6
South Island total	515,182	141,718	19.8
New Zealand total	1,757,451	549,385	18.6

Table 6: Total area represented by each data source in the 2022 NEFD database

Data source	Net stocked area (000 ha)	Proportion of total area (%)	Number of owners at national level
Data collected in the NEFD survey			
10,000 hectares+	1,012	58%	27
1,000-9,999 hectares	218	12%	68
40-999 hectares	246	14%	1,637
NEFD Survey total¹	1,476	84%	1,732
NEFD resource <40 hectares	12	1%	
New planting imputation (1992-2006) ²	203	12%	
2004 AgriQuality small forest growers (<40 hectares) ³	67	4%	
Total	1,758	100%	

Notes

1. Data collected from NEFD survey only.
2. Adjustment made this year to the area of new forest planted between 1992 and 2006. New planting imputation is discussed in Appendix 5 (page 46).
3. Small Forest Grower Survey Report, AgriQuality New Zealand, April 2005

Table 7: Number of forest owners by national size class, as at 1 April 2022¹

Wood Supply Region	40-99 ha	100-499 ha	500-999 ha	1000-9999 ha	10,000+ ha
Northland	118	85	14	11	6
Central North Island	112	103	21	19	14
East Coast	43	40	7	15	9
Hawkes Bay	53	42	2	10	11
Southern North Island	198	162	15	14	9
Nelson and Marlborough	166	100	7	14	4
West Coast	5	4	1	1	2
Canterbury	70	77	4	6	4
Otago and Southland	135	78	14	14	9
New Zealand total²	893	668	76	68	27

Notes

1. The Table shows the size class of the forest owner at a national level and the regions where the owner has forests located. This does not show the size of the forest at regional level.
2. The New Zealand totals do not equal the sum of the wood supply regions because some owners have forests in more than one region. This is particularly the case for owners in the 1,000-9,000 hectare and 10,000+ hectare size classes.

Table 8: Forest area by forest owner national size class, as at 1 April 2022

Wood Supply Region	< 40 ha	40-99 ha	100-499 ha	500-999 ha	1000-9999 ha	10,000+ ha	Total ha
Northland	35,497	7,600	16,114	8,744	29,540	102,534	200,029
Central North Island	57,737	6,875	21,071	13,586	51,145	414,442	564,856
East Coast	16,822	2,591	9,539	5,243	36,967	87,384	158,546
Hawkes Bay	21,963	3,221	8,228	1,358	16,609	90,065	141,444
Southern North Island	45,104	12,209	32,360	9,319	21,838	56,562	177,393
Nelson and Marlborough	24,860	10,361	17,994	4,956	21,690	88,378	168,239
West Coast	2,794	380	611	617	345	24,652	29,399
Canterbury	32,766	4,425	14,029	2,082	8,443	33,067	94,812
Otago and Southland	43,410	8,570	15,543	8,628	31,249	115,330	222,730
New Zealand total	280,953	56,233	135,490	54,533	217,826	1,012,414	1,757,450



Harvesting

An estimate of total harvest volumes for New Zealand

Along with NEFD harvest figures, the Ministry for Primary Industries also publishes Forestry Production Statistics (FPS) quarterly and annually on the Te Uru Rākau website. These statistics, obtained from New Zealand wood processors, report on production and stock levels of various wood products and total roundwood removal. Note, in this report the total volume harvested is based on the FPS Roundwood data. This is due to the NEFD figures only representing forests larger than 40 hectares and hence is not representative of the national harvesting trends.

The estimated total harvest volume for the year ended 31 March 2022 was 34.4 million cubic metres, a 0.4 percent increase on the previous year. The majority of this harvest volume came from radiata pine (92.8 percent), followed by Douglas-fir (4.5 percent). Other exotic species made up the remaining 2.7 percent.

Radiata pine is typically harvested when it is between 26 and 32 years old. The area-weighted average clear fell age of radiata pine has decreased from 28.5 years in 2021 to 27.8 years in the year ended 31 March 2022.

Of the radiata pine harvest, the proportion of recovered volume sold as pulp and chip logs has decreased to 15 percent, from 19 percent in 2021. Approximately 12 percent of harvest was sold as pruned logs, a 2 percentage point increase from last year.

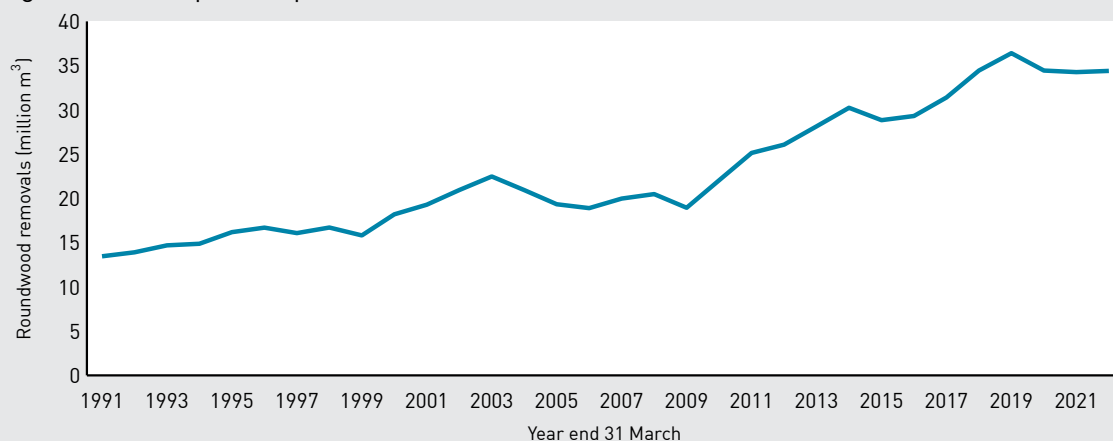
Deforestation Intentions Survey

The Deforestation Intention Survey is commissioned by MPI to provide information on future rates of deforestation of planted production forest. The work is needed to assist with projecting New Zealand's likely greenhouse gas emissions over the second commitment period of the Kyoto Protocol and beyond under New Zealand's Paris agreement commitments. This information is also needed to inform future policy development. The latest report can be found on the Te Uru Rākau website: <https://www.teururakau.govt.nz/news-and-resources/open-data-and-forecasting/forestry/new-zealands-forests/>

Wood Availability Forecasts

Regional and national wood availability forecasts are prepared by the industry and MPI under the NEFD work programme. They apply a range of harvesting scenarios and other factors that show potential volumes of logs that may be harvested by large and small-scale forest owners over the next 30 years. These forecasts are available on the Te Uru Rākau website: <https://www.teururakau.govt.nz/news-and-resources/open-data-and-forecasting/forestry/new-zealands-forests/>

Figure 10: Total planted production forest roundwood removals¹



1. Harvest volumes are based on MPI roundwood removal figures

Planting

We estimate 85,000 hectares of total planting occurred during the year to December 2021, an increase on previous years. The total planting is made up from 45,000 hectares of new planting and 40,000 hectares of replanting. Approximately 50,221 hectares of previously harvested forest was awaiting either replanting or a land use decision as at 1 April 2022 (Figure 12). This is an increase of around 2,500 hectares on the previous year.

Figure 11: Total planted area, year ending 31 December^{1,2}

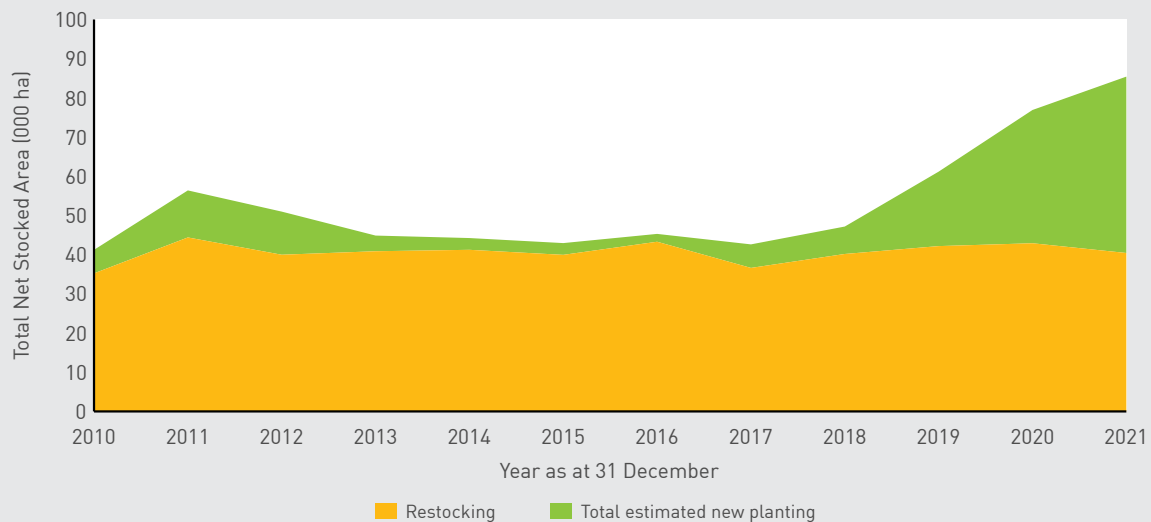
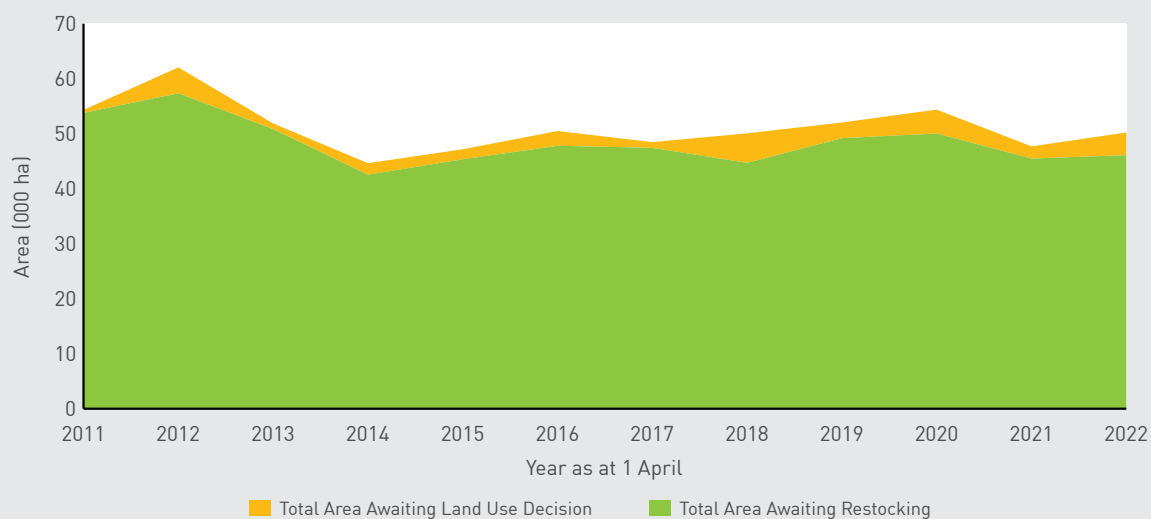


Figure 12: Harvested forest awaiting either replanting or a land use decision, as at 1 April 2022

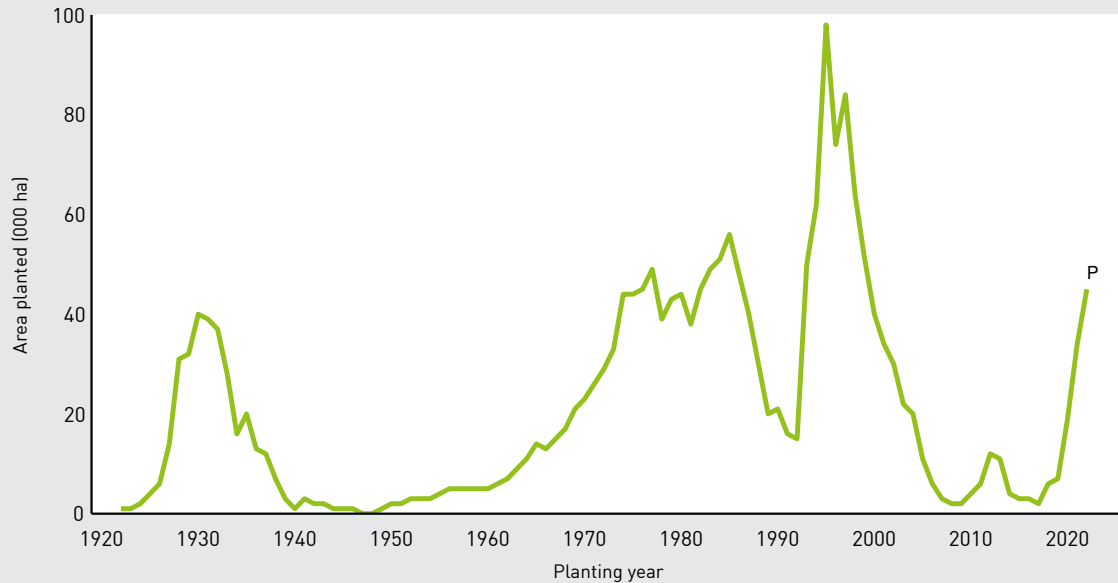


New planting

New planting to December 2021 is estimated at 45,000 hectares, based on a survey of large forest owners and the amount established by smaller forest owners under Te Uru Rākau forestry schemes (Figure 13).

The land cover prior to new planting is presented in Table 9. Due to the small area of new planting in recent years and the influence of a small number of forest owners undertaking new planting, proportions of land cover types prior to planting may differ markedly between years and are not necessarily indicative of future trends.

Figure 13: New Land Planted in Production Forest in New Zealand



Sources

Until 1987, the statistics were compiled by the New Zealand Forest Service. The figures for 1988 to 1991 are estimates from NEFD surveys. The figures from 1992 onwards are based on nursery surveys undertaken by the Ministry for Primary Industries and predecessor agencies which are reviewed when NEFD survey data are received and revised as appropriate.

Table 9: Land cover prior to new planting, year ending December

Calendar years	Improved pasture ¹ (%)	Unimproved pasture ² (%)	Other woody vegetation ³ (%)	Area of new planting (ha)
1994	49	35	16	98,000
1995	67	22	11	74,000
1996	36	50	14	84,000
1997	43	46	11	64,000
1998	44	47	9	51,000
1999	56	30	14	40,000
2000	52	31	17	34,000
2001	68	9	23	30,000
2002	31	49	19	22,000
2003	28	46	26	20,000
2004	18	46	37	11,000
2005	2	19	79	6,000
2006	2	35	62	3,000
2007	11	9	80	2,000
2008	57	2	41	2,000
2009	27	58	15	4,000
2010	64	29	6	6,000
2011	42	53	5	12,000
2012	61	32	7	11,000
2013	33	43	24	4,000
2014	13	79	8	3,000
2015	30	43	27	3,000
2016	1	63	36	2,000
2017	53	40	7	6,000
2018	60	20	19	7,000
2019	37	43	20	19,000
2020	44	54	2	34,000
2021	59	36	6	45,000

Notes

1. Improved pasture - land that has been fertilised and contains improved pasture species.
2. Unimproved pasture - land not fertilised, with no improved pasture species sown.
3. Woody vegetation - land predominantly covered in bracken gorse, mānuka, kānuka, or other woody species.

Nursery Survey

Along with planting information gathered in the NEFD, MPI also runs the annual 'Nursery Survey'. This report surveys commercial forest nurseries for tree stock sales information. It provides provisional estimates of tree stock sales and areas of commercial forest planted annually.

This report is published on Te Uru Rākau's website:
<https://www.teururakau.govt.nz/news-and-resources/open-data-and-forecasting/forestry/new-zealands-forests/>



Forest area by age class and wood supply region

The following presents net stocked area by region for all New Zealand plantation species: radiata pine, Douglas-fir, cypress species, other softwoods, eucalypt species, and other hardwoods.



Table 10: Area planted in all species by territorial authority, as at 1 April 2022

	All species											Total [ha]
	Age class (years)											
	1-5 Years [ha]	6-10 Years [ha]	11-15 Years [ha]	16-20 Years [ha]	21-25 Years [ha]	26-30 Years [ha]	31-35 Years [ha]	36-40 Years [ha]	41-50 Years [ha]	51-60 Years [ha]	61+ Year [ha]	
Northland wood supply region												
Far North District	14,796	17,881	13,913	10,321	11,260	13,737	3,884	3,686	1,192	56	22	90,748
Whangarei District	5,560	6,337	3,553	3,418	5,563	5,955	765	457	522	135	23	32,288
Kaipara District	10,330	7,794	3,014	3,176	6,212	6,435	1,089	334	220	19	13	38,636
Auckland Council	3,076	2,889	4,409	7,119	9,309	9,319	533	690	887	98	29	38,358
Region total	33,762	34,901	24,889	24,034	32,344	35,446	6,271	5,167	2,821	308	87	200,030
Central North Island wood supply region												
Thames-Coromandel District	2,326	4,019	5,365	4,130	3,272	2,653	202	1,035	391	37	59	23,489
Hauraki District	485	201	C	212	915	1,441	52	25	33	6	6	C
Waikato District	1,572	1,106	1,478	2,055	5,096	4,920	618	203	154	15	65	17,282
Matamata-Piako District	258	128	266	239	156	441	70	34	86	0	3	1,681
Hamilton City	2	0	0	0	3	0	8	1	0	0	0	14
Tauranga District	0	0	0	12	33	38	17	6	0	0	0	106
Western Bay of Plenty District	2,919	2,978	2,150	3,291	4,515	4,740	367	272	337	2	90	21,661
Rotorua District	7,361	7,394	7,346	9,484	11,275	6,201	1,254	418	689	126	201	51,749
Kawerau District	508	0	0	8	40	20	0	0	0	0	0	576
Whakatane District	19,285	19,101	20,404	13,746	24,795	10,792	1,504	846	467	42	69	111,051
Opotiki District	1,877	4,434	2,329	991	1,443	967	640	810	156	0	0	13,647
Waipa District	145	62	173	175	827	823	72	39	54	3	3	2,376
Otorohanga District	407	263	10	984	1,197	1,792	200	139	43	4	2	5,041
Waitomo District	1,531	632	3,919	3,782	5,994	8,928	518	456	149	2	0	25,911
Ruapehu District	7,109	10,144	4,895	3,614	11,702	12,942	1,718	1,143	399	14	24	53,704
South Waikato District	10,816	9,061	7,108	12,184	14,134	5,883	221	105	40	32	117	59,701
Taupo District	28,977	35,173	24,522	32,515	30,926	15,105	3,992	1,240	377	362	94	173,283
Region total	85,578	94,696	C	87,422	116,323	77,686	11,453	6,772	3,375	645	733	C
East Coast wood supply region												
Gisborne District	19,247	20,425	15,390	13,730	31,324	43,771	6,050	4,810	2,975	726	98	158,546
Region total	19,247	20,425	15,390	13,730	31,324	43,771	6,050	4,810	2,975	726	98	158,546
Hawke's Bay wood supply region												
Wairoa District	10,915	4,793	7,966	8,944	8,792	18,906	221	131	378	109	57	61,212
Hastings District	8,933	7,009	7,080	10,217	11,385	16,418	1,122	624	521	92	50	63,451
Napier City	1	0	0	0	0	13	0	12	0	0	0	26
Central Hawkes Bay District	1,290	452	991	1,001	5,597	5,735	600	530	427	50	82	16,755
Region total	21,139	12,254	16,037	20,162	25,774	41,072	1,943	1,297	1,326	251	189	141,444
Southern North Island wood supply region												
New Plymouth District	C	149	362	321	1,234	1,412	272	155	132	3	0	C
Stratford District	788	946	298	479	462	2,984	221	226	57	315	209	6,986
South Taranaki District	507	415	563	695	2,613	3,289	789	388	404	27	C	C
Wanganui District	1,110	1,804	1,429	2,802	3,626	9,825	1,738	276	193	34	80	22,917
Rangitikei District	1,286	983	1,163	2,097	7,272	7,049	471	392	488	235	92	21,528
Manawatu District	266	591	177	608	1,035	3,156	443	395	395	16	17	7,099
Kapiti Coast District	54	138	63	244	776	1,114	286	339	59	0	0	3,073
Upper Hutt City	217	529	550	672	974	908	383	287	248	40	51	4,859
Porirua City	3	10	48	129	32	413	288	171	117	3	0	1,214
Wellington City	7	0	68	8	80	291	98	27	2	0	0	581
Lower Hutt City	0	0	0	0	22	90	2	18	97	0	0	229
Palmerston North City	C	352	586	250	162	718	90	30	171	0	0	C
Taranua District	2,670	2,825	2,181	1,520	3,169	5,557	710	975	608	51	18	20,284
Masterton District	7,496	3,265	2,464	3,297	5,060	12,084	1,371	1,932	586	320	50	37,925
Horowhenua District	1,019	555	1,060	1,522	1,152	2,480	519	335	254	C	59	C
Carterton District	932	1,797	1,301	824	6,300	2,208	373	122	219	98	0	14,174
South Wairarapa District	C	1,161	496	980	2,112	2,771	701	240	342	C	7	10,183
Region total	18,957	15,520	12,809	16,448	36,081	56,349	8,755	6,308	4,372	1,200	C	177,393
North Island total	178,683	177,796	149,298	161,796	241,846	254,324	34,472	24,354	14,869	3,130	1,701	1,242,269

	All species											Total [ha]
	Age class (years)											
	1-5 Years (ha)	6-10 Years (ha)	11-15 Years (ha)	16-20 Years (ha)	21-25 Years (ha)	26-30 Years (ha)	31-35 Years (ha)	36-40 Years (ha)	41-50 Years (ha)	51-60 Years (ha)	61+ Year (ha)	
Nelson and Marlborough wood supply region												
Nelson City	1,303	1,025	2,209	1,447	1,507	1,250	24	140	273	25	24	9,227
Tasman District	11,681	9,504	13,301	15,178	13,518	14,522	1,818	1,389	1,603	247	114	82,875
Marlborough District	7,326	13,067	7,378	7,158	10,767	22,477	1,980	2,451	1,447	191	43	74,285
Kaikoura District	C	66	28	47	191	725	16	25	87	32	2	C
Region total	C	23,662	22,916	23,830	25,983	38,974	3,838	4,005	3,410	495	183	C
West Coast wood supply region												
Buller District	800	703	771	277	282	563	56	214	625	7	19	4,317
Grey District	3,114	1,712	1,673	2,817	2,128	1,109	73	296	546	433	47	13,948
Westland District	714	752	1,736	2,567	2,286	1,636	93	677	519	53	101	11,134
Region total	4,628	3,167	4,180	5,661	4,696	3,308	222	1,187	1,690	493	167	29,399
Canterbury wood supply region												
Hurunui District	1,864	2,964	3,207	6,753	8,345	8,356	1,119	1,143	639	228	87	34,705
Waimakariri District	309	561	664	759	1,533	3,528	617	182	111	37	42	8,343
Christchurch City	467	593	315	765	1,504	5,017	397	475	299	18	41	9,891
Selwyn District	1,810	894	592	442	1,482	3,114	880	576	294	135	C	C
Ashburton District	147	278	369	295	484	833	247	144	111	36	57	3,001
Timaru District	1,537	749	523	2,574	2,094	2,915	821	257	464	44	49	12,027
Mackenzie District	249	74	314	412	913	2,078	218	279	215	102	162	5,016
Waimate District	814	824	619	897	3,539	3,974	348	285	195	50	40	11,585
Region total	7,197	6,937	6,603	12,897	19,894	29,815	4,647	3,341	2,328	650	C	C
Otago and Southland wood supply region												
Waitaki District	4,119	3,278	988	2,574	6,812	4,865	307	545	357	C	36	C
Dunedin City	2,379	4,033	2,213	807	1,396	3,506	693	1,023	444	C	70	C
Queenstown-Lakes District	0	0	3	14	71	188	137	180	C	9	27	C
Central Otago District	C	506	392	461	2,654	1,723	177	374	228	161	57	C
Clutha District	11,311	8,340	8,053	13,045	23,206	17,513	1,715	2,098	1,416	386	388	87,471
Gore District	538	0	115	123	2,273	1,394	90	34	57	49	5	4,678
Southland District	8,589	8,363	6,957	12,245	23,575	16,507	1,301	2,061	1,592	179	54	81,423
Invercargill City	C	C	96	43	65	209	81	10	20	6	0	844
Region total	27,358	C	18,817	29,312	60,052	45,905	4,501	6,325	C	866	637	222,731
South Island total	60,127	58,500	52,516	71,700	110,625	118,002	13,208	14,858	11,651	2,504	1,490	515,182
New Zealand total	238,810	236,297	201,814	233,496	352,471	372,326	47,680	39,212	26,520	5,634	3,191	1,757,451

Figure 14: Distribution of all species forest area by age class and island, as at 1 April 2022

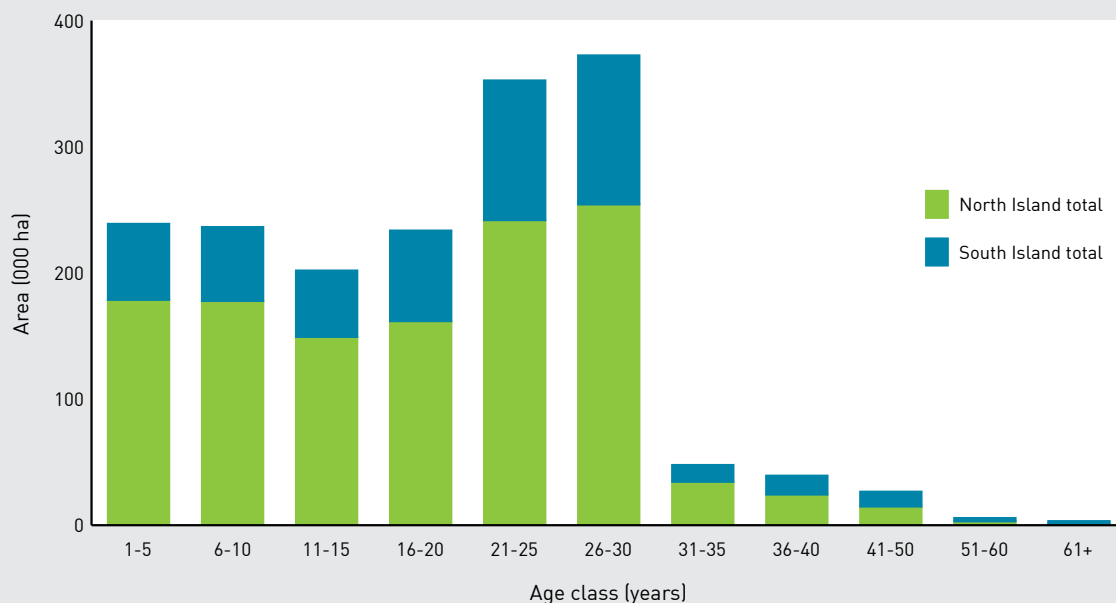


Table 11: Area planted in radiata pine by territorial authority, as at 1 April 2022

	Radiata pine											Total [ha]
	Age class (years)											
	1-5 Years [ha]	6-10 Years [ha]	11-15 Years [ha]	16-20 Years [ha]	21-25 Years [ha]	26-30 Years [ha]	31-35 Years [ha]	36-40 Years [ha]	41-50 Years [ha]	51-60 Years [ha]	61+ Year [ha]	
Northland wood supply region												
Far North District	14,493	17,792	13,902	10,077	10,763	13,470	3,798	3,470	1,047	20	1	88,833
Whangarei District	5,449	6,322	3,552	3,393	5,359	5,672	697	436	440	123	3	31,446
Kaipara District	10,275	7,789	3,014	3,099	5,911	6,295	1,034	323	211	18	13	37,982
Auckland Council	3,052	2,879	4,357	6,980	9,064	8,938	436	611	789	87	10	37,203
Region total	33,269	34,782	24,825	23,549	31,097	34,375	5,965	4,840	2,487	248	27	195,464
Central North Island wood supply region												
Thames-Coromandel District	2,324	4,017	5,365	4,122	3,265	2,598	198	1,011	338	34	25	23,297
Hauraki District	483	198	C	198	888	1,424	52	21	33	0	0	C
Waikato District	1,567	1,101	1,469	1,978	5,026	4,859	579	183	152	15	57	16,986
Matamata-Piako District	258	127	266	230	129	423	67	32	86	0	0	1,618
Hamilton City	2	0	0	0	3	0	8	1	0	0	0	14
Tauranga District	0	0	0	10	26	36	16	5	0	0	0	93
Western Bay of Plenty District	2,903	2,960	2,120	3,176	4,206	4,540	333	192	296	2	0	20,728
Rotorua District	7,272	7,224	7,264	9,294	10,487	5,596	764	107	257	14	15	48,294
Kawerau District	507	0	0	8	20	6	0	0	0	0	0	541
Whakatane District	19,195	19,091	20,393	13,329	23,729	9,499	262	145	378	18	9	106,048
Opotiki District	1,877	4,426	2,322	987	1,428	959	636	806	156	0	0	13,597
Waipa District	134	62	173	134	667	756	68	36	45	3	2	2,080
Otorohanga District	405	263	10	936	1,129	1,726	166	99	43	0	0	4,777
Waitomo District	1,531	632	2,717	3,436	5,797	8,604	514	374	127	0	0	23,732
Ruapehu District	6,609	9,251	4,776	3,467	11,297	12,695	1,713	1,126	310	1	0	51,245
South Waikato District	10,070	7,240	6,516	11,530	13,914	5,817	209	76	C	26	76	C
Taupo District	28,185	34,378	23,387	31,183	29,719	14,300	2,376	535	122	57	65	164,307
Region total	83,322	90,970	C	84,018	111,730	73,838	7,961	4,749	C	170	249	536,299
East Coast wood supply region												
Gisborne District	18,931	19,829	14,459	13,227	30,734	43,304	5,927	4,599	2,733	27	23	153,793
Region total	18,931	19,829	14,459	13,227	30,734	43,304	5,927	4,599	2,733	27	23	153,793
Hawke's Bay wood supply region												
Wairoa District	9,833	4,494	7,712	8,593	8,681	18,852	201	119	351	15	4	58,855
Hastings District	8,218	6,868	6,892	10,168	11,242	16,207	919	529	449	59	26	61,577
Napier City	0	0	0	0	0	7	0	8	0	0	0	15
Central Hawkes Bay District	942	451	881	969	5,520	5,687	557	459	413	43	16	15,938
Region total	18,993	11,813	15,485	19,730	25,443	40,753	1,677	1,115	1,213	117	46	136,385
Southern North Island wood supply region												
New Plymouth District	C	117	205	221	846	1,370	257	148	126	1	0	C
Stratford District	746	420	289	465	444	2,924	220	175	40	0	1	5,724
South Taranaki District	482	414	138	665	2,555	3,238	773	387	400	27	C	C
Wanganui District	1,017	1,804	1,411	2,614	3,485	9,728	1,727	250	183	33	73	22,325
Rangitikei District	1,264	856	796	1,688	7,031	6,899	409	360	444	154	27	19,928
Manawatu District	246	576	177	577	953	3,103	418	335	369	16	5	6,775
Kapiti Coast District	54	138	63	240	747	1,086	284	339	58	0	0	3,009
Upper Hutt City	217	529	550	669	962	896	367	242	221	30	35	4,718
Porirua City	3	10	48	129	32	406	288	169	117	3	0	1,205
Wellington City	7	0	68	8	80	291	98	27	2	0	0	581
Lower Hutt City	0	0	0	0	22	88	0	18	97	0	0	225
Palmerston North City	C	290	574	237	159	664	89	29	171	0	0	C
Taranua District	2,660	2,825	1,894	1,500	3,113	5,539	705	702	581	48	16	19,583
Masterton District	7,483	3,201	2,418	3,217	4,980	11,986	1,337	1,875	562	183	22	37,264
Horowhenua District	920	551	1,054	1,510	1,141	2,404	491	314	248	C	C	8,686
Carterton District	930	1,757	1,301	819	6,248	2,200	356	111	199	55	0	13,976
South Wairarapa District	C	1,156	496	970	2,096	2,730	650	234	209	C	2	9,916
Region total	18,631	14,644	11,482	15,529	34,894	55,552	8,469	5,715	4,027	596	232	169,771
North Island total	173,146	172,038	143,173	156,053	233,898	247,822	29,999	21,018	12,830	1,158	577	1,191,712

	Radiata pine Age class (years)											Total (ha)
	1-5 Years (ha)	6-10 Years (ha)	11-15 Years (ha)	16-20 Years (ha)	21-25 Years (ha)	26-30 Years (ha)	31-35 Years (ha)	36-40 Years (ha)	41-50 Years (ha)	51-60 Years (ha)	61+ Year (ha)	
Nelson and Marlborough wood supply region												
Nelson City	1,259	993	2,200	1,439	1,468	1,212	18	62	71	1	0	8,723
Tasman District	11,607	9,464	13,151	14,818	12,665	12,385	803	986	778	152	23	76,832
Marlborough District	7,303	12,848	7,264	6,958	10,170	22,008	1,896	2,165	1,271	138	28	72,049
Kaikoura District	C	58	23	39	174	715	16	22	60	0	2	C
Region total	C	23,364	22,638	23,254	24,477	36,320	2,733	3,235	2,180	291	53	C
West Coast wood supply region												
Buller District	730	624	537	158	151	509	54	43	114	4	0	2,924
Grey District	2,998	1,629	1,451	2,637	1,817	1,073	60	114	318	140	0	12,237
Westland District	671	752	1,207	1,157	885	807	53	45	428	33	1	6,039
Region total	4,399	3,005	3,195	3,952	2,853	2,389	167	202	860	177	1	21,200
Canterbury wood supply region												
Hurunui District	1,517	2,445	2,175	4,849	7,439	7,300	912	637	514	71	17	27,876
Waimakariri District	212	513	636	713	1,473	3,278	565	171	59	37	41	7,698
Christchurch City	467	586	315	552	1,141	3,303	323	391	251	13	24	7,366
Selwyn District	1,543	893	592	417	1,178	2,453	437	362	262	42	1	8,180
Ashburton District	120	271	369	237	297	623	102	87	61	36	21	2,224
Timaru District	1,513	428	317	384	657	2,492	640	231	67	25	0	6,754
Mackenzie District	203	50	143	98	316	1,202	76	102	123	41	2	2,356
Waimate District	814	765	606	572	1,949	2,367	296	136	92	21	26	7,644
Region total	6,389	5,951	5,153	7,822	14,450	23,018	3,351	2,117	1,429	286	132	70,098
Otago and Southland wood supply region												
Waitaki District	4,109	3,161	763	2,410	3,201	4,262	266	439	280	C	20	C
Dunedin City	2,317	3,858	2,158	753	1,147	3,207	516	385	103	C	13	C
Queenstown-Lakes District	0	0	0	10	14	C	22	37	C	4	27	240
Central Otago District	C	C	C	123	206	989	59	230	129	9	52	1,858
Clutha District	9,304	5,292	5,269	8,957	13,671	14,960	1,084	598	492	233	189	60,049
Gore District	64	0	17	93	818	1,181	66	34	54	37	1	2,365
Southland District	5,769	4,721	4,760	6,270	11,753	10,297	686	1,046	882	133	16	46,333
Invercargill City	C	C	96	43	64	206	81	10	20	6	0	838
Region total	21,670	17,287	C	18,659	30,874	C	2,780	2,779	C	480	318	145,109
South Island total	53,261	49,607	44,060	53,687	72,654	96,875	9,031	8,333	6,509	1,234	504	395,755
New Zealand total	226,407	221,644	187,233	209,740	306,552	344,697	39,030	29,351	19,339	2,392	1,081	1,587,466

Figure 15: Distribution of radiata pine forest area by age class and island, as at 1 April 2022

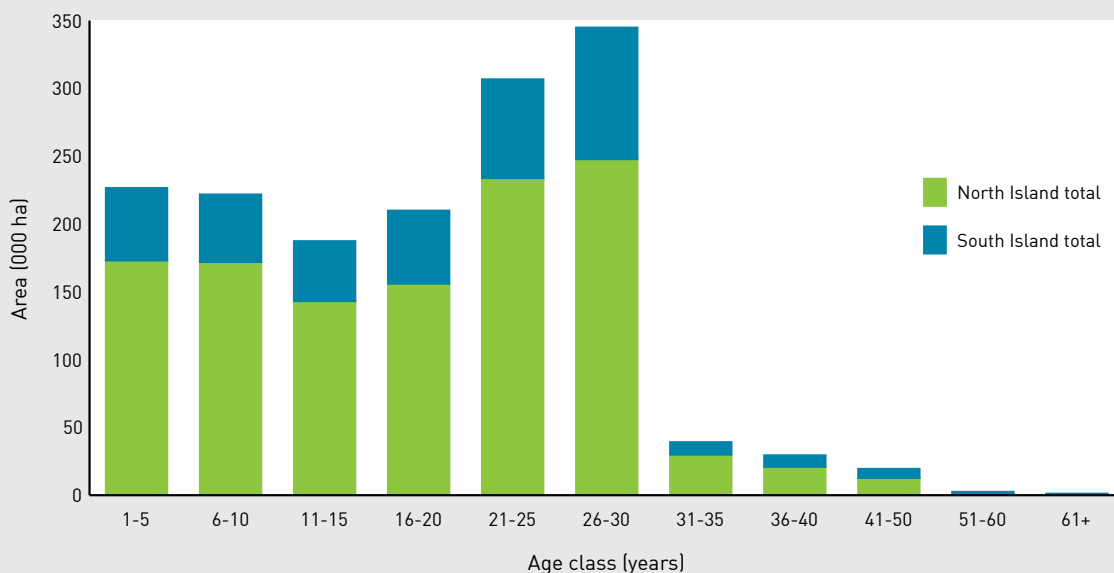


Table 12: Area planted in Douglas-fir by territorial authority, as at 1 April 2022

	Douglas-fir											Total [ha]
	Age class (years)											
	1-5 Years [ha]	6-10 Years [ha]	11-15 Years [ha]	16-20 Years [ha]	21-25 Years [ha]	26-30 Years [ha]	31-35 Years [ha]	36-40 Years [ha]	41-50 Years [ha]	51-60 Years [ha]	61+ Year [ha]	
Northland wood supply region												
Far North District	0	0	0	0	0	2	0	0	2	0	0	4
Whangarei District	0	0	0	0	0	0	0	0	0	0	0	0
Kaipara District	0	0	0	0	0	0	0	0	0	0	0	0
Auckland Council	0	6	0	0	0	0	0	0	0	0	0	6
Region total	0	6	0	0	0	2	0	0	2	0	0	10
Central North Island wood supply region												
Thames-Coromandel District	0	0	0	0	0	0	0	0	0	0	0	0
Hauraki District	0	0	0	0	0	0	0	0	0	0	0	0
Waikato District	0	0	0	0	0	1	0	1	0	0	0	2
Matamata-Piako District	0	0	0	0	4	0	0	0	0	0	0	4
Hamilton City	0	0	0	0	0	0	0	0	0	0	0	0
Tauranga District	0	0	0	0	0	0	0	0	0	0	0	0
Western Bay of Plenty District	0	0	0	3	0	8	0	2	10	0	2	0
Rotorua District	2	0	0	14	480	308	424	113	372	86	130	1,929
Kawerau District	0	0	0	0	0	0	0	0	0	0	0	0
Whakatane District	0	0	10	182	824	1,134	1,187	643	17	21	31	4,049
Opotiki District	0	0	0	0	0	0	0	0	0	0	0	0
Waipa District	0	0	0	0	2	1	0	0	0	0	0	3
Otorohanga District	0	0	0	36	52	25	1	0	0	1	0	115
Waitomo District	0	0	1,146	340	143	235	0	0	6	2	0	1,872
Ruapehu District	106	278	115	91	200	84	0	1	11	1	0	887
South Waikato District	24	0	70	362	7	9	0	0	4	0	7	483
Taupo District	84	49	102	1,084	994	209	1,542	657	204	56	6	4,987
Region total	216	327	1,443	2,112	0	2,014	3,154	1,417	624	167	176	0
East Coast wood supply region												
Gisborne District	0	200	283	342	482	218	0	1	4	495	33	2,058
Region total	0	200	283	342	482	218	0	1	4	495	33	2,058
Hawke's Bay wood supply region												
Wairoa District	0	44	0	28	12	1	0	0	1	66	18	170
Hastings District	0	1	0	12	18	116	0	0	22	21	7	0
Napier City	0	0	0	0	0	0	0	0	0	0	0	0
Central Hawkes Bay District	0	0	0	5	7	2	22	0	1	1	11	49
Region total	0	45	0	45	37	119	22	0	24	88	36	0
Southern North Island wood supply region												
New Plymouth District	0	0	0	0	0	0	0	0	0	0	0	0
Stratford District	0	0	0	1	1	0	0	0	1	262	186	451
South Taranaki District	0	0	0	0	0	0	0	0	1	0	0	1
Wanganui District	0	0	8	2	13	10	4	12	4	0	0	53
Rangitikei District	0	0	150	4	55	52	0	1	9	5	7	283
Manawatu District	0	0	0	2	5	0	3	7	3	0	0	20
Kapiti Coast District	0	0	0	0	3	0	0	0	0	0	0	3
Upper Hutt City	0	0	0	2	8	1	4	0	2	1	2	20
Porirua City	0	0	0	0	0	0	0	0	0	0	0	0
Wellington City	0	0	0	0	0	0	0	0	0	0	0	0
Lower Hutt City	0	0	0	0	0	0	0	0	0	0	0	0
Palmerston North City	0	22	1	0	0	0	0	0	0	0	0	23
Taranua District	2	0	0	5	18	0	0	1	11	0	0	37
Masterton District	0	2	1	6	10	4	0	0	1	90	14	128
Horowhenua District	0	0	0	0	0	0	1	0	0	12	0	13
Carterton District	0	0	0	1	37	0	1	0	0	0	0	39
South Wairarapa District	0	0	0	0	0	0	0	1	0	0	0	1
Region total	2	24	160	23	150	67	13	22	32	370	209	1,072
North Island total	218	602	1,886	2,522	3,380	2,420	3,189	1,457	686	1,120	454	17,934

	Douglas-fir											Total (ha)
	Age class (years)											
	1-5 Years (ha)	6-10 Years (ha)	11-15 Years (ha)	16-20 Years (ha)	21-25 Years (ha)	26-30 Years (ha)	31-35 Years (ha)	36-40 Years (ha)	41-50 Years (ha)	51-60 Years (ha)	61+ Year (ha)	
Nelson and Marlborough wood supply region												
Nelson City	0	0	9	5	28	27	2	78	144	21	9	323
Tasman District	5	6	100	214	690	1,771	950	229	347	56	29	4,397
Marlborough District	0	134	41	63	376	251	20	221	62	27	6	1,201
Kaikoura District	0	7	5	0	10	10	0	1	22	31	0	86
Region total	5	147	155	282	1,104	2,059	972	529	575	135	44	6,007
West Coast wood supply region												
Buller District	0	79	234	111	123	21	2	0	42	1	1	614
Grey District	36	83	115	106	223	2	0	9	42	216	1	833
Westland District	0	0	0	0	7	5	0	0	13	11	0	36
Region total	36	162	349	217	353	28	2	9	97	228	2	1,483
Canterbury wood supply region												
Hurunui District	184	507	344	1,278	816	968	195	298	32	4	7	4,633
Waimakariri District	15	31	21	32	39	26	6	7	37	0	0	214
Christchurch City	0	0	0	0	84	51	23	17	29	3	0	207
Selwyn District	36	0	0	17	217	469	338	175	23	93	21	1,389
Ashburton District	C	6	0	37	122	172	66	38	50	0	2	C
Timaru District	24	321	189	2,151	1,360	79	91	10	392	12	31	4,660
Mackenzie District	34	14	147	306	561	265	113	65	73	C	2	C
Waimate District	0	47	1	253	1,463	1,482	25	84	40	17	13	3,425
Region total	C	926	702	4,074	4,662	3,512	857	694	676	C	76	16,629
Otago and Southland wood supply region												
Waitaki District	0	22	95	138	3,501	398	14	60	53	C	0	C
Dunedin City	0	9	51	24	230	125	86	571	307	7	11	1,421
Queenstown-Lakes District	0	0	0	4	51	120	112	133	C	2	0	C
Central Otago District	C	173	288	273	2,241	165	17	76	48	7	0	C
Clutha District	1,060	2,715	2,590	3,758	8,731	2,151	504	1,263	740	137	161	23,810
Gore District	0	0	0	25	1,352	69	5	0	3	12	4	1,470
Southland District	169	1,368	924	5,226	8,884	5,156	136	834	451	26	24	23,198
Invercargill City	0	0	0	0	0	0	0	0	0	0	0	0
Region total	C	4,287	3,948	9,448	24,990	8,184	874	2,937	C	C	200	58,052
South Island total	1,717	5,522	5,154	14,021	31,109	13,783	2,705	4,169	2,979	690	322	82,171
New Zealand total	1,935	6,124	7,040	16,543	34,489	16,203	5,894	5,626	3,665	1,810	776	100,105

Figure 16: Distribution of Douglas-fir forest area by age class and island, as at 1 April 2022

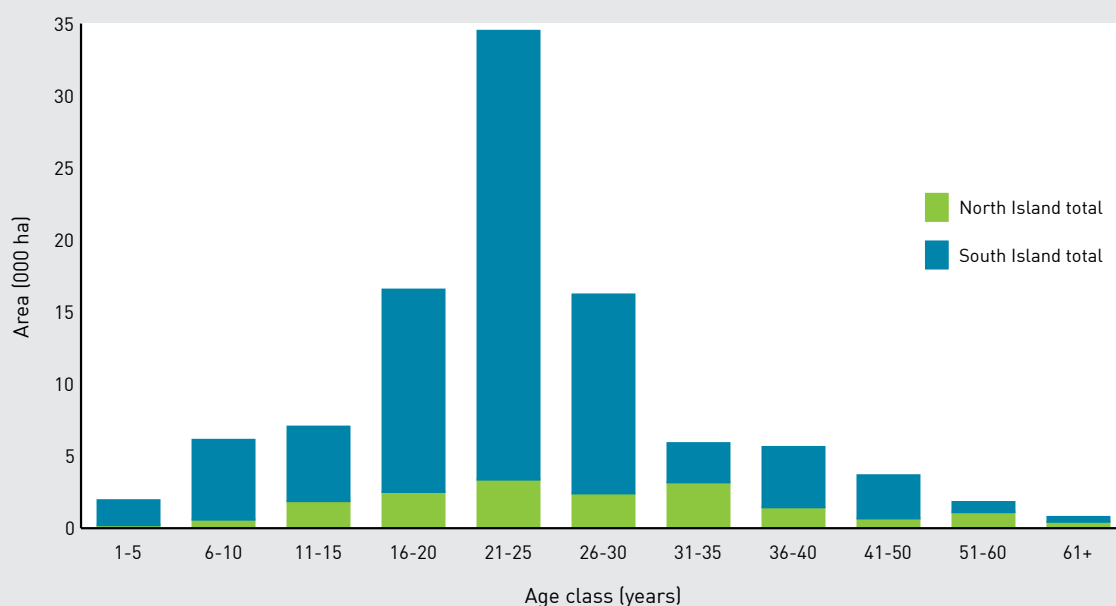


Table 13: Area planted in cypress species by territorial authority, as at 1 April 2022

	Cypress species											Total [ha]
	Age class (years)											
	1-5 Years [ha]	6-10 Years [ha]	11-15 Years [ha]	16-20 Years [ha]	21-25 Years [ha]	26-30 Years [ha]	31-35 Years [ha]	36-40 Years [ha]	41-50 Years [ha]	51-60 Years [ha]	61+ Year [ha]	
Northland wood supply region												
Far North District	1	0	4	19	48	44	22	3	17	4	0	162
Whangarei District	0	0	0	C	18	14	3	0	2	0	0	C
Kaipara District	0	0	0	41	0	3	0	0	1	0	0	45
Auckland Council	0	3	15	43	37	105	24	4	2	1	0	234
Region total	1	3	19	C	103	166	49	7	22	5	0	C
Central North Island wood supply region												
Thames-Coromandel District	0	0	0	0	1	1	0	2	0	0	0	4
Hauraki District	0	0	17	0	0	0	0	3	0	0	0	20
Waikato District	0	5	0	0	1	0	1	6	1	0	0	14
Matamata-Piako District	0	0	0	0	0	0	0	0	0	0	0	0
Hamilton City	0	0	0	0	0	0	0	0	0	0	0	0
Tauranga District	0	0	0	0	0	0	0	0	0	0	0	0
Western Bay of Plenty District	0	0	15	37	13	12	0	18	2	0	0	97
Rotorua District	19	23	4	135	2	8	9	41	0	0	1	242
Kawerau District	0	0	0	0	0	0	0	0	0	0	0	0
Whakatane District	8	0	1	102	57	14	0	37	0	0	0	219
Opotiki District	0	2	0	0	0	0	0	0	0	0	0	2
Waipa District	0	0	0	0	0	3	0	0	0	0	0	3
Otorohanga District	0	0	0	0	0	0	0	4	0	0	0	4
Waitomo District	0	0	0	0	0	1	0	0	0	0	0	1
Ruapehu District	2	6	0	1	12	0	0	1	0	0	11	33
South Waikato District	0	7	2	0	0	10	9	0	0	0	0	28
Taupo District	20	17	221	130	20	46	3	1	0	0	0	458
Region total	49	60	260	405	106	95	22	113	3	0	12	1,125
East Coast wood supply region												
Gisborne District	0	42	35	16	31	60	9	19	23	25	4	264
Region total	0	42	35	16	31	60	9	19	23	25	4	264
Hawke's Bay wood supply region												
Wairoa District	0	0	0	C	C	19	20	0	0	0	13	219
Hastings District	0	7	48	20	41	7	0	0	0	0	1	124
Napier City	0	0	0	0	0	0	0	0	0	0	0	0
Central Hawkes Bay District	1	0	0	3	C	0	0	1	1	1	0	C
Region total	1	7	48	C	104	26	20	1	1	1	14	C
Southern North Island wood supply region												
New Plymouth District	0	0	0	0	0	0	0	3	0	0	0	3
Stratford District	0	47	1	0	0	4	0	36	6	15	3	112
South Taranaki District	0	0	0	1	4	0	0	0	0	0	0	5
Wanganui District	0	0	8	95	20	2	0	0	C	0	0	C
Rangitikei District	0	1	4	21	4	11	3	18	21	71	3	157
Manawatu District	4	0	0	0	10	5	1	14	4	0	1	39
Kapiti Coast District	0	0	0	0	1	0	0	0	0	0	0	1
Upper Hutt City	0	0	0	0	1	1	2	40	10	0	0	54
Porirua City	0	0	0	0	0	1	0	0	0	0	0	1
Wellington City	0	0	0	0	0	0	0	0	0	0	0	0
Lower Hutt City	0	0	0	0	0	0	0	0	0	0	0	0
Palmerston North City	0	20	7	0	0	0	0	0	0	0	0	27
Taranua District	0	0	0	0	0	0	0	0	0	0	0	0
Masterton District	0	0	4	4	15	13	0	3	0	0	0	39
Horowhenua District	0	0	4	2	4	2	0	0	C	0	0	C
Carterton District	0	0	0	2	0	0	0	0	0	0	0	2
South Wairarapa District	0	0	0	2	4	0	1	0	0	0	0	7
Region total	4	68	28	127	63	39	7	114	46	86	7	589
North Island total	55	180	390	797	407	386	107	254	95	117	37	2,825

	Cypress species											Total (ha)
	Age class (years)											
	1-5 Years (ha)	6-10 Years (ha)	11-15 Years (ha)	16-20 Years (ha)	21-25 Years (ha)	26-30 Years (ha)	31-35 Years (ha)	36-40 Years (ha)	41-50 Years (ha)	51-60 Years (ha)	61+ Year (ha)	
Nelson and Marlborough wood supply region												
Nelson City	0	1	0	3	10	5	0	0	0	0	7	26
Tasman District	6	3	10	11	37	71	6	0	1	0	8	153
Marlborough District	0	11	14	47	89	26	11	9	0	0	2	209
Kaikoura District	0	0	0	8	0	0	0	0	1	1	0	10
Region total	6	15	24	69	136	102	17	9	2	1	17	398
West Coast wood supply region												
Buller District	0	0	0	0	0	1	0	16	0	0	6	23
Grey District	10	0	40	34	87	17	7	100	11	0	12	318
Westland District	0	0	461	1,257	1,192	398	5	322	18	0	7	3,660
Region total	10	0	501	1,291	1,279	416	12	438	29	0	25	4,001
Canterbury wood supply region												
Hurunui District	0	1	59	13	23	7	1	0	0	0	9	113
Waimakariri District	0	0	0	0	8	0	5	0	0	0	0	13
Christchurch City	0	0	0	0	14	139	3	0	3	0	0	159
Selwyn District	0	0	0	0	C	C	1	0	0	0	0	29
Ashburton District	1	0	0	2	0	2	4	0	0	0	0	9
Timaru District	0	0	0	0	9	12	0	0	0	0	0	21
Mackenzie District	0	0	0	4	0	22	0	0	0	0	0	26
Waimate District	0	0	0	14	7	4	7	0	0	0	0	32
Region total	1	1	59	33	C	C	21	0	3	0	9	402
Otago and Southland wood supply region												
Waitaki District	0	14	6	5	17	15	13	0	0	0	4	74
Dunedin City	0	0	0	C	10	62	40	20	0	0	0	C
Queenstown-Lakes District	0	0	0	0	0	0	0	0	0	0	0	0
Central Otago District	0	0	C	0	0	0	4	0	0	0	0	C
Clutha District	0	41	85	262	204	120	54	11	53	1	1	832
Gore District	0	0	0	0	15	0	0	0	0	0	0	15
Southland District	3	26	72	44	115	3	15	39	24	0	0	341
Invercargill City	0	0	0	0	C	0	0	0	0	0	0	C
Region total	3	81	C	C	C	200	126	70	77	1	5	1,431
South Island total	20	97	754	1,729	1,856	914	176	517	111	2	56	6,232
New Zealand total	75	277	1,144	2,526	2,263	1,300	283	771	206	119	93	9,057

Figure 17: Distribution of cypress species forest area by age class and island, as at 1 April 2022

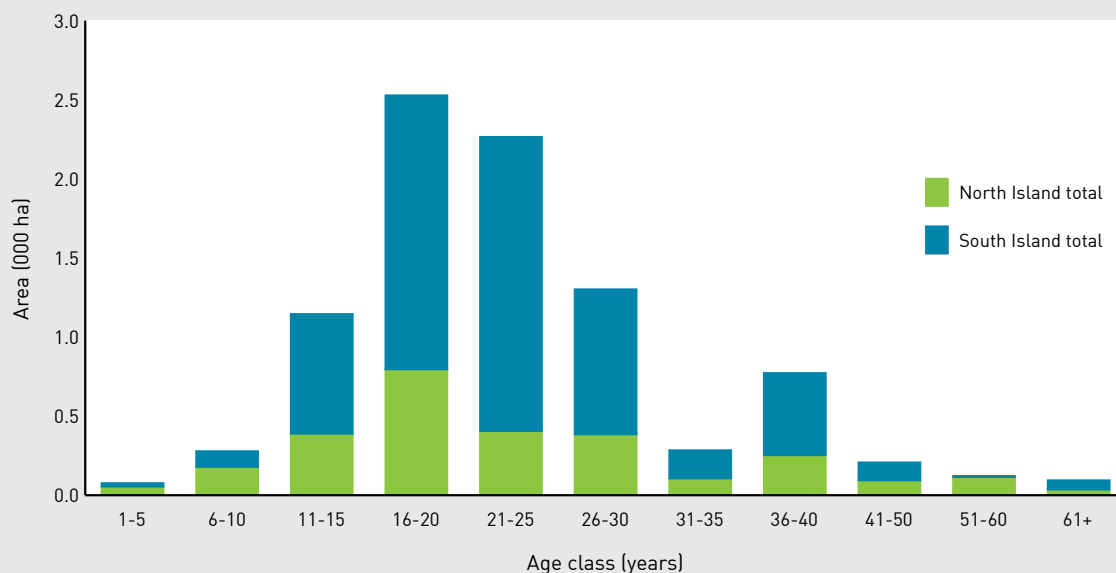


Table 14: Area planted in other softwoods by territorial authority, as at 1 April 2022

	Other softwoods											Total [ha]
	Age class (years)											
	1-5 Years [ha]	6-10 Years [ha]	11-15 Years [ha]	16-20 Years [ha]	21-25 Years [ha]	26-30 Years [ha]	31-35 Years [ha]	36-40 Years [ha]	41-50 Years [ha]	51-60 Years [ha]	61+ Year [ha]	
Northland wood supply region												
Far North District	75	11	1	78	110	80	31	6	23	30	9	454
Whangarei District	46	0	1	15	69	80	1	3	2	11	C	C
Kaipara District	24	0	0	11	66	C	C	4	0	0	0	131
Auckland Council	C	0	2	36	33	64	10	24	17	2	3	C
Region total	C	11	4	140	278	C	C	37	42	43	C	1,040
Central North Island wood supply region												
Thames-Coromandel District	2	2	0	6	4	19	2	3	4	3	23	68
Hauraki District	0	1	19	14	19	0	0	1	0	6	0	60
Waikato District	5	0	4	46	55	16	16	5	0	0	7	154
Matamata-Piako District	0	1	0	9	15	4	1	1	0	0	3	34
Hamilton City	0	0	0	0	0	0	0	0	0	0	0	0
Tauranga District	0	0	0	0	0	0	0	0	0	0	0	0
Western Bay of Plenty District	5	18	8	22	85	106	5	1	3	0	10	263
Rotorua District	42	C	72	5	111	91	26	56	41	19	37	C
Kawerau District	0	0	0	0	0	0	0	0	0	0	0	0
Whakatane District	0	10	0	19	39	45	13	C	68	3	27	C
Opotiki District	0	6	4	0	2	3	1	0	0	0	0	16
Waipa District	0	0	0	5	25	32	2	1	0	0	1	66
Otorohanga District	0	0	0	3	7	24	24	3	0	3	0	64
Waitomo District	0	0	0	4	31	44	1	5	8	0	0	93
Ruapehu District	385	593	4	20	186	161	5	5	77	12	13	1,461
South Waikato District	16	C	0	0	C	C	1	C	6	1	34	191
Taupo District	125	98	32	14	61	57	61	17	40	35	22	562
Region total	580	822	143	167	C	C	158	139	247	82	177	3,823
East Coast wood supply region												
Gisborne District	99	199	41	85	33	92	13	29	161	162	25	939
Region total	99	199	41	85	33	92	13	29	161	162	25	939
Hawke's Bay wood supply region												
Wairoa District	338	28	181	71	23	34	0	1	25	27	22	750
Hastings District	111	C	27	13	43	62	176	33	C	9	12	533
Napier City	0	0	0	0	0	0	0	2	0	0	0	2
Central Hawkes Bay District	C	1	C	15	40	13	16	10	1	3	C	207
Region total	C	C	C	99	106	109	192	46	C	39	C	1,492
Southern North Island wood supply region												
New Plymouth District	0	31	157	91	369	21	12	0	5	2	0	688
Stratford District	31	443	6	9	5	9	0	1	4	31	17	556
South Taranaki District	0	0	C	24	32	30	C	0	0	0	3	199
Wanganui District	93	0	1	80	76	52	2	13	1	1	1	320
Rangitikei District	0	118	207	377	129	33	31	6	9	1	17	928
Manawatu District	6	0	0	23	38	22	8	16	3	0	10	126
Kapiti Coast District	0	0	0	3	13	12	1	0	0	0	0	29
Upper Hutt City	0	0	0	1	3	7	9	0	0	9	14	43
Porirua City	0	0	0	0	0	6	0	0	0	0	0	6
Wellington City	0	0	0	0	0	0	0	0	0	0	0	0
Lower Hutt City	0	0	0	0	0	2	2	0	0	0	0	4
Palmerston North City	0	10	4	0	0	0	1	0	0	0	0	15
Taranua District	C	0	0	8	20	6	2	260	8	0	2	C
Masterton District	0	2	9	51	44	45	27	43	19	43	14	297
Horowhenua District	0	0	2	9	7	19	9	1	3	0	1	51
Carterton District	0	0	0	1	15	5	7	4	0	43	0	75
South Wairarapa District	0	0	0	7	11	1	4	0	1	0	5	29
Region total	C	604	C	684	762	270	C	344	53	130	84	C
North Island total	1,486	1,691	886	1,175	1,869	1,323	546	595	550	456	397	10,974

	Other softwoods											Total (ha)
	Age class (years)											
	1-5 Years (ha)	6-10 Years (ha)	11-15 Years (ha)	16-20 Years (ha)	21-25 Years (ha)	26-30 Years (ha)	31-35 Years (ha)	36-40 Years (ha)	41-50 Years (ha)	51-60 Years (ha)	61+ Year (ha)	
Nelson and Marlborough wood supply region												
Nelson City	44	31	0	0	1	1	0	0	38	3	8	126
Tasman District	59	29	38	129	74	189	20	111	202	27	24	902
Marlborough District	C	13	4	62	116	92	20	20	23	12	0	C
Kaikoura District	0	0	0	0	7	0	0	0	1	0	0	8
Region total	C	73	42	191	198	282	40	131	264	42	32	C
West Coast wood supply region												
Buller District	25	0	0	1	4	25	0	23	149	2	5	234
Grey District	70	0	0	2	1	8	0	C	130	51	25	C
Westland District	43	0	0	68	130	83	0	7	28	9	20	388
Region total	138	0	0	71	135	116	0	C	307	62	50	C
Canterbury wood supply region												
Hurunui District	157	11	629	580	61	46	5	198	93	153	50	1,983
Waimakariri District	82	11	7	14	10	127	21	1	15	0	1	289
Christchurch City	0	7	0	23	68	963	36	36	5	2	7	1,147
Selwyn District	146	1	0	6	60	157	34	29	7	0	0	440
Ashburton District	0	0	0	19	58	27	C	10	0	0	34	C
Timaru District	0	0	17	34	43	305	82	4	5	4	8	502
Mackenzie District	12	10	24	4	28	559	28	C	16	C	138	986
Waimate District	0	12	12	58	114	94	7	61	63	6	0	427
Region total	397	52	689	738	442	2,278	C	C	204	C	238	C
Otago and Southland wood supply region												
Waitaki District	0	66	70	19	87	141	1	20	11	5	8	428
Dunedin City	62	166	4	2	6	74	26	23	28	3	11	405
Queenstown-Lakes District	0	0	3	0	6	22	3	7	0	3	0	44
Central Otago District	183	293	86	65	196	520	82	55	29	142	5	1,656
Clutha District	588	237	81	55	281	251	37	87	65	10	33	1,725
Gore District	0	0	2	3	5	141	0	0	0	0	0	151
Southland District	C	C	8	85	54	153	42	104	182	16	10	1,562
Invercargill City	0	0	0	0	0	3	0	0	0	0	0	3
Region total	C	C	254	229	635	1,305	191	296	315	179	67	5,974
South Island total	2,124	1,159	985	1,229	1,410	3,981	511	935	1,090	505	387	14,316
New Zealand total	3,610	2,850	1,871	2,404	3,279	5,304	1,057	1,530	1,640	961	784	25,290

Figure 18: Distribution of other softwoods forest area by age class and island, as at 1 April 2022

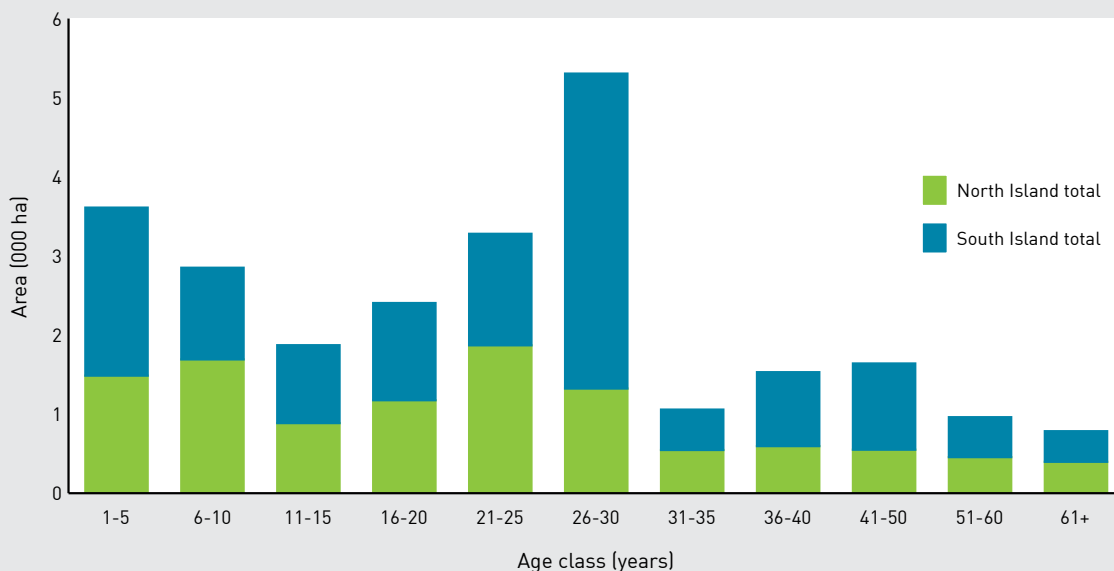


Table 15: Area planted in eucalypts by territorial authority, as at 1 April 2022

	Eucalypts											Total (ha)
	Age class (years)											
	1-5 Years (ha)	6-10 Years (ha)	11-15 Years (ha)	16-20 Years (ha)	21-25 Years (ha)	26-30 Years (ha)	31-35 Years (ha)	36-40 Years (ha)	41-50 Years (ha)	51-60 Years (ha)	61+ Year (ha)	
Northland wood supply region												
Far North District	100	0	5	23	3	15	2	100	66	1	10	325
Whangarei District	17	0	0	0	0	36	C	5	65	0	1	C
Kaipara District	24	0	0	0	0	76	0	5	1	1	0	107
Auckland Council	0	C	27	18	0	12	7	6	13	3	0	C
Region total	141	C	32	41	3	139	C	116	145	5	11	651
Central North Island wood supply region												
Thames-Coromandel District	0	0	0	0	0	0	0	11	43	0	9	63
Hauraki District	0	0	0	0	1	0	0	0	0	0	0	1
Waikato District	0	0	0	0	0	2	0	2	0	0	0	4
Matamata-Piako District	0	0	0	0	0	0	0	0	0	0	0	0
Hamilton City	0	0	0	0	0	0	0	0	0	0	0	0
Tauranga District	0	0	0	0	0	0	0	0	0	0	0	0
Western Bay of Plenty District	11	0	7	30	160	6	0	25	2	0	77	318
Rotorua District	19	77	0	0	12	33	0	24	2	0	9	176
Kawerau District	0	0	0	0	20	11	0	0	0	0	0	31
Whakatane District	0	0	0	95	49	31	24	2	1	0	0	202
Opotiki District	0	0	0	0	0	0	0	4	0	0	0	4
Waipa District	0	0	0	0	0	0	0	0	0	0	0	0
Otorohanga District	0	0	0	0	0	0	0	4	0	0	0	4
Waitomo District	0	0	56	0	0	0	1	40	3	0	0	100
Ruapehu District	6	13	0	34	4	0	0	0	0	0	0	57
South Waikato District	C	C	505	262	146	0	0	2	0	3	0	3,362
Taupo District	470	472	773	82	38	414	5	20	1	209	1	2,485
Region total	C	C	1,341	503	430	497	30	134	52	212	96	6,807
East Coast wood supply region												
Gisborne District	73	129	156	4	13	20	42	89	20	9	6	561
Region total	73	129	156	4	13	20	42	89	20	9	6	561
Hawke's Bay wood supply region												
Wairoa District	C	164	73	116	26	0	0	1	0	1	0	C
Hastings District	88	11	99	1	0	1	7	26	7	1	0	241
Napier City	0	0	0	0	0	6	0	0	0	0	0	6
Central Hawkes Bay District	198	0	106	2	0	0	1	0	10	2	0	319
Region total	C	175	278	119	26	7	8	27	17	4	0	C
Southern North Island wood supply region												
New Plymouth District	0	0	0	0	9	0	0	0	0	0	0	9
Stratford District	0	0	0	0	0	0	0	13	6	5	1	25
South Taranaki District	C	1	C	0	0	0	1	0	0	0	0	44
Wanganui District	0	0	0	0	0	0	0	0	0	0	0	0
Rangitikei District	7	8	6	2	5	7	1	4	1	0	0	41
Manawatu District	10	3	0	0	10	1	0	0	0	0	0	24
Kapiti Coast District	0	0	0	0	0	0	0	0	0	0	0	0
Upper Hutt City	0	0	0	0	0	0	1	0	14	0	0	15
Porirua City	0	0	0	0	0	0	0	0	0	0	0	0
Wellington City	0	0	0	0	0	0	0	0	0	0	0	0
Lower Hutt City	0	0	0	0	0	0	0	0	0	0	0	0
Palmerston North City	0	10	0	C	C	0	0	C	0	0	0	17
Taranua District	0	0	0	0	0	0	0	0	0	0	0	0
Masterton District	13	35	19	2	4	2	0	4	0	0	0	79
Horowhenua District	0	4	0	0	0	1	0	19	2	0	0	26
Carterton District	2	15	0	0	0	0	0	0	0	0	0	17
South Wairarapa District	0	0	0	0	0	0	7	0	123	0	0	130
Region total	C	76	C	C	C	11	10	C	146	5	1	427
North Island total	2,048	2,687	1,849	676	501	674	107	407	380	235	114	9,678

	Eucalypts											Total (ha)
	Age class (years)											
	1-5 Years (ha)	6-10 Years (ha)	11-15 Years (ha)	16-20 Years (ha)	21-25 Years (ha)	26-30 Years (ha)	31-35 Years (ha)	36-40 Years (ha)	41-50 Years (ha)	51-60 Years (ha)	61+ Year (ha)	
Nelson and Marlborough wood supply region												
Nelson City	0	0	0	0	0	0	0	0	17	0	0	17
Tasman District	0	0	0	0	1	7	0	26	197	1	1	233
Marlborough District	6	58	54	18	0	1	2	13	39	12	1	204
Kaikoura District	0	0	0	0	0	0	0	1	0	0	0	1
Region total	6	58	54	18	1	8	2	40	253	13	2	455
West Coast wood supply region												
Buller District	0	0	0	0	0	0	0	28	320	0	7	355
Grey District	0	0	0	0	0	3	0	0	43	26	1	73
Westland District	0	0	0	0	1	2	0	10	28	0	0	41
Region total	0	0	0	0	1	5	0	38	391	26	8	469
Canterbury wood supply region												
Hurunui District	0	0	0	14	0	0	1	0	0	0	0	15
Waimakariri District	0	6	0	0	0	0	0	0	0	0	0	6
Christchurch City	0	0	0	0	10	24	2	3	0	0	10	49
Selwyn District	0	0	0	2	0	0	1	6	0	0	0	9
Ashburton District	1	0	0	0	0	0	0	3	0	0	0	4
Timaru District	0	0	0	3	0	7	3	0	0	0	0	13
Mackenzie District	0	0	0	0	0	0	0	0	0	0	0	0
Waimate District	0	0	0	0	0	0	0	2	0	0	0	2
Region total	1	6	0	19	10	31	7	14	0	0	10	98
Otago and Southland wood supply region												
Waitaki District	2	8	37	0	0	0	8	12	7	0	1	75
Dunedin City	0	0	0	0	0	0	18	13	0	0	0	0
Queenstown-Lakes District	0	0	0	0	0	0	0	0	0	0	0	0
Central Otago District	0	0	0	0	0	1	0	6	21	0	0	28
Clutha District	343	29	28	6	291	5	13	110	43	0	2	870
Gore District	474	0	96	0	79	0	12	0	0	0	0	661
Southland District	1,945	1,922	1,190	610	2,717	800	406	21	48	3	2	9,664
Invercargill City	0	0	0	0	0	0	0	0	0	0	0	0
Region total	0	1,959	1,351	616	3,087	0	457	162	119	3	5	11,335
South Island total	2,773	2,023	1,405	653	3,099	854	466	254	763	42	25	12,357
New Zealand total	4,821	4,710	3,254	1,329	3,600	1,528	573	661	1,143	277	139	22,035

Figure 19: Distribution of eucalypts forest area by age class and island, as at 1 April 2022

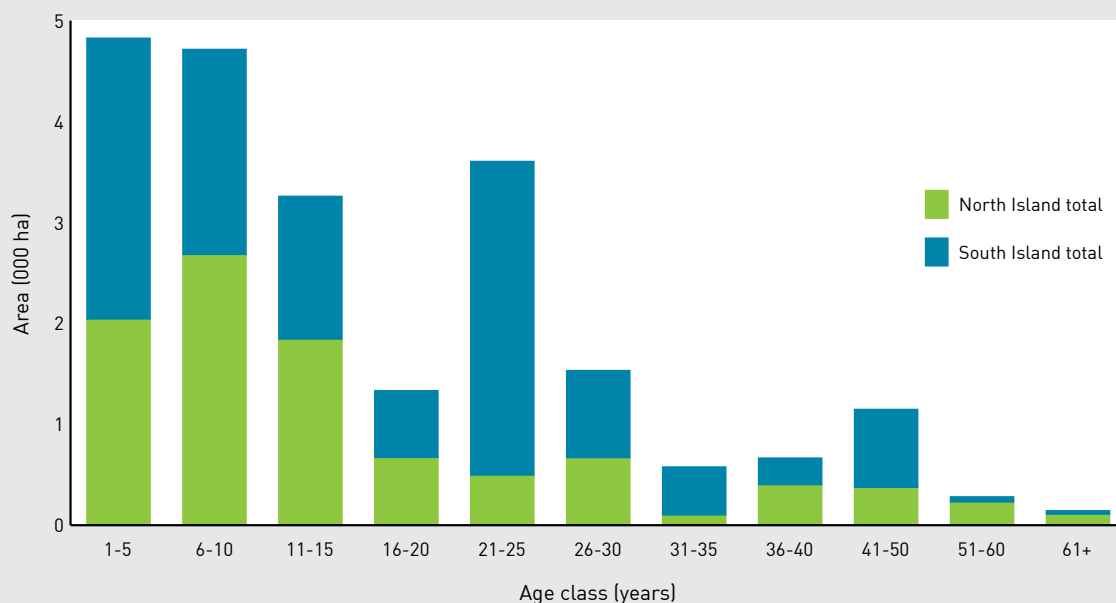


Table 16: Area planted in other hardwoods by territorial authority, as at 1 April 2022

	Other hardwoods											Total [ha]
	Age class (years)											
	1-5 Years [ha]	6-10 Years [ha]	11-15 Years [ha]	16-20 Years [ha]	21-25 Years [ha]	26-30 Years [ha]	31-35 Years [ha]	36-40 Years [ha]	41-50 Years [ha]	51-60 Years [ha]	61+ Year [ha]	
Northland wood supply region												
Far North District	127	78	1	124	336	126	31	107	C	1	2	C
Whangarei District	48	15	0	4	117	153	56	13	13	1	2	422
Kaipara District	C	5	0	25	235	51	39	2	7	0	0	C
Auckland Council	C	0	8	42	175	200	56	45	66	5	16	C
Region total	187	98	9	195	863	530	182	167	C	7	20	2,381
Central North Island wood supply region												
Thames-Coromandel District	0	0	0	2	2	35	2	8	6	0	2	57
Hauraki District	2	2	28	0	7	17	0	0	0	0	6	62
Waikato District	0	0	5	31	14	42	22	6	1	0	1	122
Matamata-Piako District	0	0	0	0	8	14	2	1	0	0	0	25
Hamilton City	0	0	0	0	0	0	0	0	0	0	0	0
Tauranga District	0	0	0	2	7	2	1	1	0	0	0	13
Western Bay of Plenty District	0	0	0	23	46	68	29	34	24	0	1	225
Rotorua District	C	17	6	36	183	165	31	77	17	7	9	C
Kawerau District	1	0	0	0	0	3	0	0	0	0	0	4
Whakatane District	82	0	0	19	97	69	18	5	3	0	2	295
Opotiki District	0	0	3	4	13	5	3	0	0	0	0	28
Waipa District	11	0	0	36	133	31	2	2	9	0	0	224
Otorohanga District	2	0	0	9	9	17	9	29	0	0	2	77
Waitomo District	0	0	0	2	23	44	2	37	5	0	0	113
Ruapehu District	1	3	0	1	3	2	0	10	1	0	0	21
South Waikato District	6	C	15	30	17	31	2	0	3	2	0	C
Taupo District	93	159	7	22	94	79	5	10	10	5	0	484
Region total	C	C	64	217	656	624	128	220	79	14	23	2,441
East Coast wood supply region												
Gisborne District	144	26	416	56	31	77	59	73	34	8	7	931
Region total	144	26	416	56	31	77	59	73	34	8	7	931
Hawke's Bay wood supply region												
Wairoa District	459	63	0	19	0	0	0	10	1	0	0	552
Hastings District	516	96	14	3	41	25	20	C	22	2	4	C
Napier City	1	0	0	0	0	0	0	2	0	0	0	3
Central Hawkes Bay District	93	0	0	7	17	33	4	60	1	0	7	222
Region total	1,069	159	14	29	58	58	24	C	24	2	11	C
Southern North Island wood supply region												
New Plymouth District	0	1	0	9	10	21	3	4	1	0	0	49
Stratford District	11	36	2	4	12	47	1	1	0	2	1	118
South Taranaki District	0	0	308	5	22	21	5	1	3	0	0	365
Wanganui District	0	0	1	11	32	33	5	1	1	0	6	90
Rangitikei District	15	0	0	5	48	47	27	3	4	4	38	191
Manawatu District	0	12	0	6	19	25	13	23	16	0	1	115
Kapiti Coast District	0	0	0	1	12	16	1	0	1	0	0	31
Upper Hutt City	0	0	0	0	0	3	0	5	1	0	0	9
Porirua City	0	0	0	0	0	0	0	2	0	0	0	2
Wellington City	0	0	0	0	0	0	0	0	0	0	0	0
Lower Hutt City	0	0	0	0	0	0	0	0	0	0	0	0
Palmerston North City	0	0	0	8	C	C	0	0	0	0	0	64
Taranua District	0	0	287	7	18	12	3	12	8	3	0	350
Masterton District	0	25	13	17	7	34	7	7	4	4	0	118
Horowhenua District	C	0	0	1	0	54	18	1	0	0	15	C
Carterton District	0	25	0	1	0	3	9	7	20	0	0	65
South Wairarapa District	0	5	0	1	1	40	39	5	9	0	0	100
Region total	C	104	611	76	C	C	131	72	68	13	61	C
North Island total	1,730	599	1,114	573	1,791	1,699	524	623	328	44	122	9,147

	Other hardwoods Age class (years)											Total (ha)
	1-5 Years (ha)	6-10 Years (ha)	11-15 Years (ha)	16-20 Years (ha)	21-25 Years (ha)	26-30 Years (ha)	31-35 Years (ha)	36-40 Years (ha)	41-50 Years (ha)	51-60 Years (ha)	61+ Year (ha)	
Nelson and Marlborough wood supply region												
Nelson City	0	0	0	0	0	5	4	0	3	0	0	12
Tasman District	4	2	2	6	51	99	39	37	78	11	29	358
Marlborough District	0	3	1	10	16	99	31	23	52	2	6	243
Kaikoura District	0	0	0	0	0	0	0	1	3	0	0	4
Region total	4	5	3	16	67	203	74	61	136	13	35	617
West Coast wood supply region												
Buller District	45	0	0	7	4	7	0	104	0	0	0	167
Grey District	0	0	67	38	0	6	6	44	2	0	8	171
Westland District	0	0	68	85	71	341	35	293	4	0	73	970
Region total	45	0	135	130	75	354	41	441	6	0	81	1,308
Canterbury wood supply region												
Hurunui District	6	0	0	19	6	35	5	10	0	0	4	85
Waimakariri District	0	0	0	0	3	97	20	3	0	0	0	123
Christchurch City	0	0	0	190	187	537	10	28	11	0	0	963
Selwyn District	0	0	0	0	9	25	0	4	2	0	0	197
Ashburton District	1	1	0	0	7	9	8	6	0	0	0	32
Timaru District	0	0	0	2	25	20	5	12	0	3	10	77
Mackenzie District	0	0	0	0	8	30	1	2	3	0	20	64
Waimate District	0	0	0	0	6	27	13	2	0	6	1	55
Region total	0	1	0	211	251	780	0	67	16	9	0	1,596
Otago and Southland wood supply region												
Waitaki District	8	7	17	2	6	49	5	14	6	0	3	117
Dunedin City	0	0	0	0	0	34	7	11	6	0	35	99
Queenstown-Lakes District	0	0	0	0	0	0	0	3	0	0	0	3
Central Otago District	0	0	0	0	11	48	15	7	1	3	0	85
Clutha District	16	26	0	7	28	26	23	29	23	5	2	185
Gore District	0	0	0	2	4	3	7	0	0	0	0	16
Southland District	67	54	3	10	52	98	16	17	5	1	2	325
Invercargill City	0	0	0	0	0	0	0	0	0	0	0	0
Region total	91	87	20	0	0	258	73	81	41	9	42	830
South Island total	232	93	158	381	497	1,595	319	650	199	31	196	4,351
New Zealand total	1,962	692	1,272	954	2,288	3,294	843	1,273	527	75	318	13,498

Figure 20: Distribution of other hardwoods forest area by age class and island, as at 1 April 2022

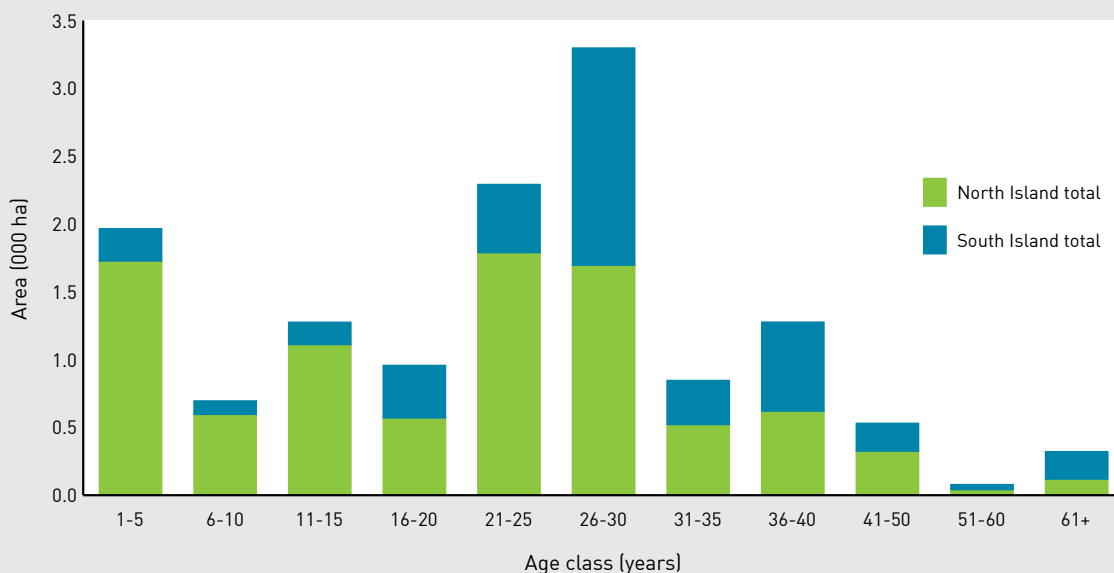


Table 17: Area planted in radiata pine pruned with production thinning by territorial authority, as at 1 April 2022

	Radiata pine pruned with production thinning											Total (ha)
	Age class (years)											
	1-5 Years (ha)	6-10 Years (ha)	11-15 Years (ha)	16-20 Years (ha)	21-25 Years (ha)	26-30 Years (ha)	31-35 Years (ha)	36-40 Years (ha)	41-50 Years (ha)	51-60 Years (ha)	61+ Year (ha)	
Northland wood supply region												
Far North District	103	74	C	208	1,243	2,072	1,664	1,807	165	4	0	C
Whangarei District	0	0	0	C	426	1,521	400	152	239	108	1	C
Kaipara District	33	150	0	25	606	1,937	C	71	95	4	4	C
Auckland Council	0	78	69	515	1,292	2,113	157	222	504	62	1	5,013
Region total	136	302	C	C	3,567	7,643	C	2,252	1,003	178	6	18,486
Central North Island wood supply region												
Thames-Coromandel District	0	0	76	28	82	398	34	123	93	0	0	834
Hauraki District	0	0	C	15	198	333	24	9	26	0	0	C
Waikato District	4	0	37	540	1,792	860	168	C	38	0	0	C
Matamata-Piako District	0	0	0	13	54	95	26	18	10	0	0	216
Hamilton City	2	0	0	0	3	0	8	1	0	0	0	14
Tauranga District	0	0	0	1	2	6	0	5	0	0	0	14
Western Bay of Plenty District	52	C	61	223	360	1,496	176	80	44	0	0	C
Rotorua District	17	0	171	1,328	715	1,007	C	32	164	1	8	C
Kawerau District	0	0	0	0	0	0	0	0	0	0	0	0
Whakatane District	0	0	669	1,643	1,155	864	59	18	43	6	0	4,457
Opotiki District	0	0	5	1	8	34	0	0	11	0	0	59
Waipa District	0	2	95	15	242	422	31	25	25	3	0	860
Otorohanga District	0	0	0	49	155	373	70	19	13	0	0	679
Waitomo District	C	50	51	52	697	1,435	147	89	37	0	0	C
Ruapehu District	C	0	98	C	1,449	2,773	41	44	39	0	0	5,544
South Waikato District	0	0	0	8	27	141	18	59	15	0	0	268
Taupo District	0	12	3,039	5,489	4,214	1,455	1,257	136	0	14	0	15,616
Region total	1,139	C	C	C	11,153	11,692	C	C	558	24	8	41,800
East Coast wood supply region												
Gisborne District	0	8	27	191	572	2,006	505	190	192	0	0	3,691
Region total	0	8	27	191	572	2,006	505	190	192	0	0	3,691
Hawke's Bay wood supply region												
Wairoa District	68	197	65	29	124	724	43	13	C	2	0	C
Hastings District	785	788	99	109	384	2,683	388	291	193	2	1	5,723
Napier City	0	0	0	0	0	6	0	2	0	0	0	8
Central Hawkes Bay District	470	216	166	139	881	2,226	263	230	C	7	0	C
Region total	1,323	1,201	330	277	1,389	5,639	694	536	467	11	1	11,868
Southern North Island wood supply region												
New Plymouth District	0	14	1	73	94	371	169	94	48	1	0	865
Stratford District	0	0	0	67	98	858	133	13	24	0	1	1,194
South Taranaki District	0	171	68	262	1,693	782	273	128	177	4	3	3,561
Wanganui District	0	94	13	892	1,537	3,864	1,003	27	45	29	0	7,504
Rangitikei District	420	78	133	426	439	2,746	233	228	178	4	0	4,885
Manawatu District	46	45	71	207	278	1,296	208	C	171	8	0	C
Kapiti Coast District	0	36	0	59	399	380	30	45	29	0	0	978
Upper Hutt City	0	0	0	6	96	89	49	30	27	5	24	326
Porirua City	0	0	0	0	14	90	18	164	7	0	0	293
Wellington City	0	0	68	0	23	0	77	2	2	0	0	172
Lower Hutt City	0	0	0	0	12	34	0	3	29	0	0	78
Palmerston North City	0	C	2	167	98	270	32	6	70	0	0	C
Taranua District	C	179	381	C	219	1,157	270	204	153	7	0	2,711
Masterton District	327	55	9	100	243	729	180	60	62	0	4	1,769
Horowhenua District	3	0	0	57	174	1,056	318	179	C	C	C	1,900
Carterton District	0	0	0	29	6	77	15	1	11	4	0	143
South Wairarapa District	0	6	23	74	166	152	C	21	13	C	0	505
Region total	C	C	769	C	5,589	13,951	C	C	C	82	C	30,050
North Island total	3,453	2,351	5,570	13,497	22,270	40,931	9,052	5,057	3,369	295	50	105,895

	Radiata pine pruned with production thinning											Total (ha)
	Age class (years)											
	1-5 Years (ha)	6-10 Years (ha)	11-15 Years (ha)	16-20 Years (ha)	21-25 Years (ha)	26-30 Years (ha)	31-35 Years (ha)	36-40 Years (ha)	41-50 Years (ha)	51-60 Years (ha)	61+ Year (ha)	
Nelson and Marlborough wood supply region												
Nelson City	0	0	0	0	5	90	0	0	0	0	0	95
Tasman District	62	0	57	144	418	1,650	317	256	96	10	1	3,011
Marlborough District	274	298	284	297	1,306	3,533	355	548	109	0	0	7,004
Kaikoura District	0	0	0	3	27	112	8	4	7	0	0	161
Region total	336	298	341	444	1,756	5,385	680	808	212	10	1	10,271
West Coast wood supply region												
Buller District	0	0	0	1	16	33	2	0	0	0	0	52
Grey District	0	20	90	0	7	173	11	44	91	0	0	436
Westland District	0	0	0	3	28	52	4	23	0	0	0	110
Region total	0	20	90	4	51	258	17	67	91	0	0	598
Canterbury wood supply region												
Hurunui District	0	10	28	280	530	1,488	268	201	188	60	3	3,056
Waimakariri District	0	0	0	32	81	956	273	75	8	26	0	1,451
Christchurch City	0	12	8	134	410	793	105	62	26	0	0	1,550
Selwyn District	0	0	0	2	0	464	191	90	108	0	0	970
Ashburton District	0	0	0	14	64	167	50	38	21	28	0	382
Timaru District	0	12	12	80	119	655	194	81	54	14	0	1,221
Mackenzie District	0	0	0	11	67	191	16	49	15	1	0	350
Waimate District	0	4	0	34	138	266	96	38	30	0	0	606
Region total	0	38	0	587	0	4,980	1,193	634	450	0	3	9,586
Otago and Southland wood supply region												
Waitaki District	0	0	5	59	310	827	79	67	146	2	0	1,495
Dunedin City	20	12	18	13	37	640	68	75	0	0	0	883
Queenstown-Lakes District	0	0	0	0	0	0	0	31	0	0	0	111
Central Otago District	0	0	0	40	0	50	16	0	0	0	36	266
Clutha District	413	28	39	148	575	2,017	380	76	83	16	0	3,775
Gore District	0	0	0	2	199	475	14	7	19	16	0	732
Southland District	78	0	128	162	1,697	1,096	219	201	291	51	0	0
Invercargill City	0	0	0	3	0	63	0	0	1	0	0	67
Region total	511	0	190	427	0	0	776	0	615	85	36	0
South Island total	847	434	675	1,462	6,149	15,806	2,666	2,051	1,368	247	40	31,745
New Zealand total	4,300	2,785	6,245	14,959	28,419	56,737	11,718	7,108	4,737	542	90	137,640

Figure 21: Distribution of radiata pine pruned with production thinning forest area by age class and island, as at 1 April 2022

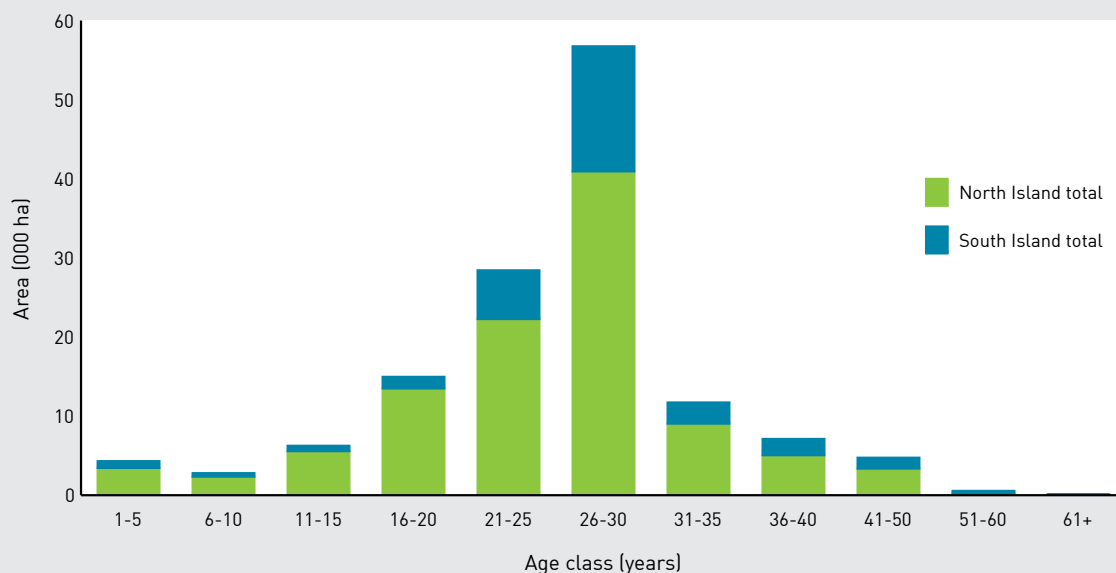


Table 18: Area planted in radiata pine unpruned with production thinning by territorial authority, as at 1 April 2022

	Radiata pine unpruned with production thinning											Total [ha]
	Age class (years)											
	1-5 Years [ha]	6-10 Years [ha]	11-15 Years [ha]	16-20 Years [ha]	21-25 Years [ha]	26-30 Years [ha]	31-35 Years [ha]	36-40 Years [ha]	41-50 Years [ha]	51-60 Years [ha]	61+ Year [ha]	
Northland wood supply region												
Far North District	619	3,334	2,652	1,637	888	C	0	C	C	0	0	9,475
Whangarei District	0	0	0	0	0	1	0	0	3	0	0	4
Kaipara District	0	0	0	26	13	389	0	0	0	C	0	C
Auckland Council	0	38	241	37	161	505	5	0	0	0	0	987
Region total	619	3,372	2,893	1,700	1,062	C	5	C	C	C	0	C
Central North Island wood supply region												
Thames-Coromandel District	2	13	53	168	36	C	0	0	40	0	0	C
Hauraki District	0	0	0	0	0	0	0	0	0	0	0	0
Waikato District	0	0	0	0	1	13	0	0	0	0	0	14
Matamata-Piako District	0	0	0	0	0	0	0	0	0	0	0	0
Hamilton City	0	0	0	0	0	0	0	0	0	0	0	0
Tauranga District	0	0	0	0	0	0	0	0	0	0	0	0
Western Bay of Plenty District	0	2	0	25	99	84	0	0	0	0	0	210
Rotorua District	2,336	189	138	57	56	116	0	0	0	0	1	2,893
Kawerau District	0	0	0	0	0	0	0	0	0	0	0	0
Whakatane District	8,489	2,370	450	193	101	108	0	0	0	0	0	11,711
Opotiki District	0	0	0	5	17	4	0	40	0	0	0	66
Waipa District	0	0	0	3	42	29	0	0	0	0	0	74
Otorohanga District	0	0	0	9	12	8	2	0	0	0	0	31
Waitomo District	0	7	0	37	265	448	32	0	0	0	0	789
Ruapehu District	242	0	159	106	750	562	109	23	0	0	0	1,951
South Waikato District	0	0	0	3	6	24	0	0	0	0	0	33
Taupo District	15,568	4,166	18	137	221	554	307	0	0	3	0	20,974
Region total	26,637	6,747	818	743	1,606	C	450	63	40	3	1	C
East Coast wood supply region												
Gisborne District	0	396	340	39	C	308	90	108	C	0	0	1,637
Region total	0	396	340	39	C	308	90	108	C	0	0	1,637
Hawke's Bay wood supply region												
Wairoa District	0	0	0	5	57	180	0	0	33	0	0	275
Hastings District	59	210	70	4	29	472	3	0	4	3	0	854
Napier City	0	0	0	0	0	0	0	0	0	0	0	0
Central Hawkes Bay District	0	0	0	0	23	8	8	15	4	0	0	58
Region total	59	210	70	9	109	660	11	15	41	3	0	1,187
Southern North Island wood supply region												
New Plymouth District	0	0	2	3	5	70	0	0	0	0	0	80
Stratford District	0	0	0	0	0	0	0	0	0	0	0	0
South Taranaki District	0	0	0	0	0	12	0	3	2	0	0	17
Wanganui District	90	160	57	85	0	172	10	0	0	0	0	574
Rangitikei District	0	0	317	725	C	419	18	0	9	0	2	C
Manawatu District	0	0	0	16	1	10	0	8	0	0	0	35
Kapiti Coast District	0	0	0	0	0	10	0	0	0	0	0	10
Upper Hutt City	0	0	0	0	0	0	0	0	0	0	0	0
Porirua City	0	0	0	0	0	0	0	0	0	0	0	0
Wellington City	7	0	0	0	28	0	0	8	0	0	0	43
Lower Hutt City	0	0	0	0	0	0	0	0	0	0	0	0
Palmerston North City	0	0	0	0	1	41	0	0	0	0	0	42
Tararua District	0	0	0	13	46	C	7	30	11	0	0	C
Masterton District	25	41	98	72	59	151	16	23	4	0	0	489
Horowhenua District	427	C	C	C	C	C	0	0	C	C	C	2,712
Carterton District	0	0	0	0	1	7	0	3	0	0	0	11
South Wairarapa District	0	23	21	103	228	21	10	6	3	0	0	415
Region total	549	C	C	C	1,884	1,370	61	81	C	C	C	7,050
North Island total	27,864	11,147	5,070	4,158	4,939	5,339	617	291	455	9	36	59,925

	Radiata pine unpruned with production thinning											Total (ha)
	Age class (years)											
	1-5 Years (ha)	6-10 Years (ha)	11-15 Years (ha)	16-20 Years (ha)	21-25 Years (ha)	26-30 Years (ha)	31-35 Years (ha)	36-40 Years (ha)	41-50 Years (ha)	51-60 Years (ha)	61+ Year (ha)	
Nelson and Marlborough wood supply region												
Nelson City	0	0	0	0	4	8	0	0	0	0	0	12
Tasman District	C	C	C	233	111	346	67	107	62	23	0	1,096
Marlborough District	0	23	3	46	58	314	151	50	206	3	0	854
Kaikoura District	0	0	0	0	0	6	0	0	0	0	0	6
Region total	C	C	C	279	173	674	218	157	268	26	0	1,968
West Coast wood supply region												
Buller District	0	0	0	0	0	0	0	0	0	0	0	0
Grey District	0	0	0	0	4	1	0	0	0	0	0	5
Westland District	0	0	0	0	0	0	0	0	4	0	0	4
Region total	0	0	0	0	4	1	0	0	4	0	0	9
Canterbury wood supply region												
Hurunui District	C	C	C	119	133	459	C	C	47	0	0	922
Waimakariri District	0	0	0	9	13	142	36	14	10	3	5	232
Christchurch City	0	0	0	2	59	56	3	7	0	1	0	128
Selwyn District	0	0	0	33	218	267	12	6	23	0	1	560
Ashburton District	0	0	0	3	8	44	20	0	37	0	0	112
Timaru District	79	44	0	1	1	33	49	22	4	0	0	233
Mackenzie District	0	10	111	8	22	28	13	16	22	22	0	252
Waimate District	62	12	0	0	19	65	13	2	3	1	0	177
Region total	C	C	C	175	473	1,094	C	C	146	27	6	2,616
Otago and Southland wood supply region												
Waitaki District	6	20	0	1	16	C	C	C	C	0	0	187
Dunedin City	0	0	0	0	10	14	0	5	0	0	0	29
Queenstown-Lakes District	0	0	0	0	1	0	0	0	0	0	0	1
Central Otago District	0	0	0	0	0	3	0	0	0	0	0	3
Clutha District	0	C	C	92	C	C	0	C	C	0	0	346
Gore District	0	0	0	0	6	38	0	0	0	0	0	44
Southland District	0	0	C	37	673	140	15	10	35	51	0	C
Invercargill City	0	0	0	0	5	6	0	0	0	0	0	11
Region total	6	C	138	130	C	345	C	92	62	51	0	C
South Island total	242	177	314	584	1,453	2,114	452	351	480	104	6	6,277
New Zealand total	28,106	11,324	5,384	4,742	6,392	7,453	1,069	642	935	113	42	66,202

Figure 22: Distribution of radiata pine unpruned with production thinning forest area by age class and island, as at 1 April 2022

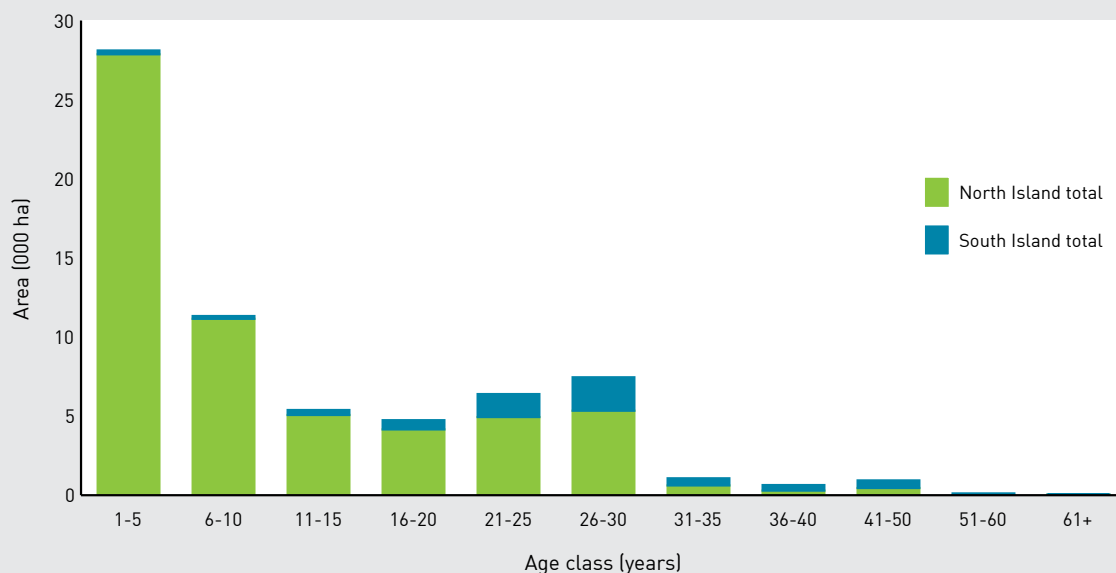


Table 19: Area planted in radiata pine pruned without production thinning by territorial authority, as at 1 April 2022

	Radiata pine pruned without production thinning											Total (ha)
	Age class (years)											
	1-5 Years (ha)	6-10 Years (ha)	11-15 Years (ha)	16-20 Years (ha)	21-25 Years (ha)	26-30 Years (ha)	31-35 Years (ha)	36-40 Years (ha)	41-50 Years (ha)	51-60 Years (ha)	61+ Year (ha)	
Northland wood supply region												
Far North District	543	738	804	1,998	4,054	7,581	1,568	688	233	7	0	18,214
Whangarei District	90	326	91	438	2,103	2,034	176	60	97	0	2	5,417
Kaipara District	1,015	15	C	725	2,801	1,832	107	18	51	1	5	C
Auckland Council	50	C	C	558	1,139	2,961	164	193	162	2	2	5,829
Region total	1,698	C	1,554	3,719	10,097	14,408	2,015	959	543	10	9	C
Central North Island wood supply region												
Thames-Coromandel District	109	17	15	84	97	456	C	C	63	1	0	1,637
Hauraki District	29	0	0	52	561	650	28	8	0	0	0	1,328
Waikato District	232	231	141	375	1,028	2,258	362	76	69	0	49	4,821
Matamata-Piako District	0	41	0	7	48	247	11	4	9	0	0	367
Hamilton City	0	0	0	0	0	0	0	0	0	0	0	0
Tauranga District	0	0	0	9	24	30	16	0	0	0	0	79
Western Bay of Plenty District	14	411	271	412	2,067	2,572	128	65	197	0	0	6,137
Rotorua District	218	1,462	1,364	1,164	4,353	3,204	331	29	50	0	1	12,176
Kawerau District	0	0	0	0	0	6	0	0	0	0	0	6
Whakatane District	33	572	1,739	1,004	7,665	6,249	161	45	309	7	0	17,784
Opotiki District	57	491	180	280	634	324	C	71	123	0	0	C
Waipa District	0	31	66	85	259	186	24	7	17	0	0	675
Otorohanga District	79	145	10	732	356	551	77	8	22	0	0	1,980
Waitomo District	323	7	C	761	3,547	4,685	247	130	35	0	0	C
Ruapehu District	162	357	329	1,270	2,859	2,646	733	335	78	0	0	8,769
South Waikato District	12	26	2	378	782	481	32	C	C	0	0	1,722
Taupo District	398	7,616	12,028	13,046	11,584	4,517	295	299	C	C	C	49,865
Region total	1,666	11,407	C	19,659	35,864	29,062	2,628	1,775	1,021	C	C	119,330
East Coast wood supply region												
Gisborne District	5,032	6,703	5,811	6,507	18,135	33,194	3,183	2,519	869	10	5	81,968
Region total	5,032	6,703	5,811	6,507	18,135	33,194	3,183	2,519	869	10	5	81,968
Hawke's Bay wood supply region												
Wairoa District	2,431	3,896	4,824	6,354	7,065	16,311	58	87	207	1	1	41,235
Hastings District	1,753	2,141	1,745	4,267	6,137	8,901	365	77	110	8	3	25,507
Napier City	0	0	0	0	0	0	0	0	0	0	0	0
Central Hawkes Bay District	204	120	571	639	2,689	2,542	105	40	64	C	1	C
Region total	4,388	6,157	7,140	11,260	15,891	27,754	528	204	381	C	5	C
Southern North Island wood supply region												
New Plymouth District	0	61	136	105	587	545	47	28	28	0	0	1,537
Stratford District	41	157	0	95	151	1,688	56	67	6	0	0	2,261
South Taranaki District	124	72	10	183	485	2,144	203	68	123	0	0	3,412
Wanganui District	231	917	709	1,070	1,503	5,149	682	118	40	4	64	10,487
Rangitikei District	190	204	88	261	3,206	2,627	89	65	81	2	0	6,813
Manawatu District	0	37	79	139	293	946	134	65	98	1	0	1,792
Kapiti Coast District	34	63	63	105	182	685	96	73	8	0	0	1,309
Upper Hutt City	0	0	1	325	253	365	43	14	19	0	1	1,021
Porirua City	0	10	3	123	18	169	33	0	C	3	0	C
Wellington City	0	0	0	8	13	268	2	17	0	0	0	308
Lower Hutt City	0	0	0	0	10	26	0	0	45	0	0	81
Palmerston North City	0	279	121	1	7	241	31	11	37	0	0	728
Taranua District	302	614	1,057	560	647	1,486	170	129	176	23	3	5,167
Masterton District	2,650	2,238	1,917	2,517	3,640	8,723	678	1,274	186	14	5	23,842
Horowhenua District	125	141	34	106	83	454	77	34	33	1	0	1,088
Carterton District	406	1,386	983	476	2,237	1,320	189	51	108	0	0	7,156
South Wairarapa District	0	550	395	328	1,144	1,344	24	C	25	0	0	C
Region total	4,103	6,729	5,596	6,402	14,459	28,180	2,554	C	C	48	73	71,250
North Island total	16,887	32,216	36,250	47,547	94,446	132,598	10,908	7,504	3,873	105	172	382,506

	Radiata pine pruned without production thinning											Total [ha]
	Age class (years)											
	1-5 Years (ha)	6-10 Years (ha)	11-15 Years (ha)	16-20 Years (ha)	21-25 Years (ha)	26-30 Years (ha)	31-35 Years (ha)	36-40 Years (ha)	41-50 Years (ha)	51-60 Years (ha)	61+ Year (ha)	
Nelson and Marlborough wood supply region												
Nelson City	0	68	60	16	115	347	14	C	15	0	0	C
Tasman District	307	356	362	730	4,440	5,353	197	224	113	11	0	12,093
Marlborough District	1,093	2,016	884	2,049	4,396	11,063	924	890	436	64	0	23,815
Kaikoura District	9	58	23	24	117	570	7	2	39	0	0	850
Region total	1,409	2,499	1,329	2,819	9,068	17,333	1,142	C	603	75	0	C
West Coast wood supply region												
Buller District	0	0	0	11	C	437	27	6	49	0	0	C
Grey District	0	C	99	1,178	1,475	750	49	64	161	60	0	C
Westland District	0	0	0	549	599	723	41	22	48	18	0	2,000
Region total	0	C	99	1,738	C	1,910	117	92	258	78	0	6,457
Canterbury wood supply region												
Hurunui District	121	54	59	353	1,381	1,624	203	284	175	8	0	4,262
Waimakariri District	0	126	231	71	197	489	206	26	5	0	0	1,351
Christchurch City	0	170	26	123	428	2,041	59	233	114	7	1	3,202
Selwyn District	0	10	6	43	225	527	8	40	5	0	0	864
Ashburton District	17	31	30	46	90	216	21	5	3	0	0	459
Timaru District	114	252	164	237	354	923	142	65	1	0	0	2,252
Mackenzie District	77	31	13	56	164	771	26	25	C	4	0	C
Waimate District	0	156	139	289	1,190	1,478	104	3	20	0	0	3,379
Region total	329	830	668	1,218	4,029	8,069	769	681	C	19	1	C
Otago and Southland wood supply region												
Waitaki District	215	1,017	316	1,710	2,151	2,382	106	307	70	34	5	8,313
Dunedin City	1,259	998	380	504	1,013	1,854	358	206	48	C	0	C
Queenstown-Lakes District	0	0	0	0	0	6	11	0	2	3	1	23
Central Otago District	C	0	C	42	114	602	23	104	79	1	0	986
Clutha District	5,954	2,275	1,531	2,967	8,644	10,552	307	212	243	206	176	33,067
Gore District	0	0	11	56	292	217	18	6	0	1	0	601
Southland District	1,259	1,621	2,389	1,449	3,608	5,430	216	174	224	12	0	16,382
Invercargill City	C	C	64	34	53	103	50	2	17	2	0	616
Region total	8,773	C	C	6,762	15,875	21,146	1,089	1,011	683	C	182	C
South Island total	10,511	9,492	6,798	12,537	31,100	48,458	3,117	2,912	1,908	437	183	127,453
New Zealand total	27,398	41,708	43,048	60,084	125,546	181,056	14,025	10,416	5,781	542	355	509,959

Figure 23: Distribution of radiata pine pruned without production thinning forest area by age class and island, as at 1 April 2022

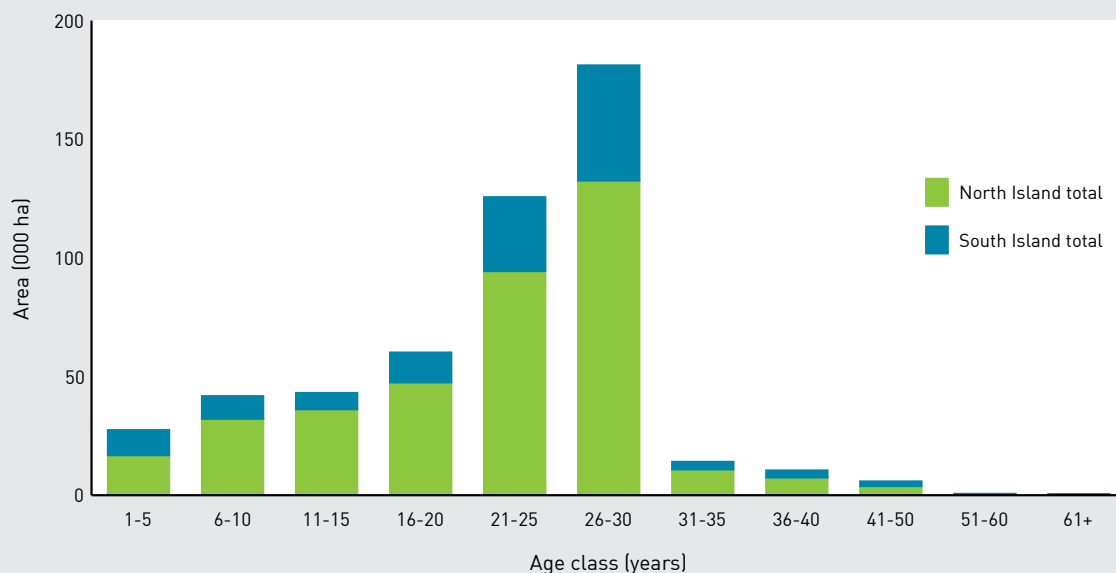
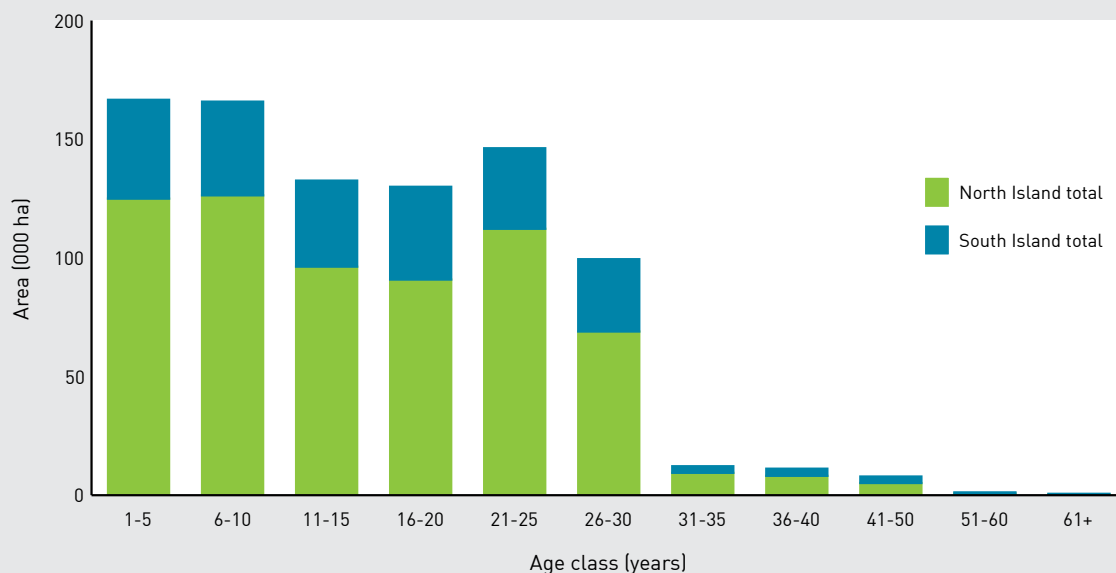


Table 20: Area planted in radiata pine unpruned without production thinning by territorial authority, as at 1 April 2022

	Radiata pine unpruned without production thinning											Total (ha)
	Age class (years)											
	1-5 Years (ha)	6-10 Years (ha)	11-15 Years (ha)	16-20 Years (ha)	21-25 Years (ha)	26-30 Years (ha)	31-35 Years (ha)	36-40 Years (ha)	41-50 Years (ha)	51-60 Years (ha)	61+ Year (ha)	
Northland wood supply region												
Far North District	13,228	13,646	10,395	6,234	4,578	3,759	566	951	386	9	1	53,753
Whangarei District	5,359	5,996	3,461	2,822	2,830	2,116	121	224	101	15	0	23,045
Kaipara District	9,227	7,624	2,812	2,323	2,491	2,137	750	234	65	12	4	27,679
Auckland Council	3,002	2,622	3,590	5,870	6,472	3,359	110	196	123	23	7	25,374
Region total	30,816	29,888	20,258	17,249	16,371	11,371	1,547	1,605	675	59	12	129,851
Central North Island wood supply region												
Thames-Coromandel District	2,213	3,987	5,221	3,842	3,050	1,646	66	191	142	33	25	20,416
Hauraki District	454	198	122	131	129	441	0	4	7	0	0	1,486
Waikato District	1,331	870	1,291	1,063	2,205	1,728	49	C	45	15	8	C
Matamata-Piako District	258	86	266	210	27	81	30	10	67	0	0	1,035
Hamilton City	0	0	0	0	0	0	0	0	0	0	0	0
Tauranga District	0	0	0	0	0	0	0	0	0	0	0	0
Western Bay of Plenty District	2,837	2,451	1,788	2,516	1,680	388	29	47	55	2	0	11,793
Rotorua District	4,701	5,573	5,591	6,745	5,363	1,269	82	46	43	13	5	29,431
Kawerau District	507	0	0	8	20	0	0	0	0	0	0	535
Whakatane District	10,673	16,149	17,535	10,489	14,808	2,278	42	82	26	5	9	72,096
Opotiki District	1,820	3,935	2,137	701	769	597	C	695	22	0	0	C
Waipa District	134	29	12	31	124	119	13	4	3	0	2	471
Otorohanga District	326	118	0	146	606	794	17	72	8	0	0	2,087
Waitomo District	1,002	568	2,662	2,586	1,288	2,036	88	155	55	0	0	10,440
Ruapehu District	5,347	8,894	4,190	1,849	6,239	6,714	830	724	193	1	0	34,981
South Waikato District	10,058	7,214	6,514	11,141	13,099	5,171	159	16	4	26	76	53,478
Taupo District	12,219	22,584	8,302	12,511	13,700	7,774	517	100	81	29	35	77,852
Region total	53,880	72,656	55,631	53,969	63,107	31,036	C	C	751	124	160	336,013
East Coast wood supply region												
Gisborne District	13,899	12,722	8,281	6,490	11,749	7,796	2,149	1,782	1,594	17	18	66,497
Region total	13,899	12,722	8,281	6,490	11,749	7,796	2,149	1,782	1,594	17	18	66,497
Hawke's Bay wood supply region												
Wairoa District	7,334	401	2,823	2,205	1,435	1,637	100	19	99	12	3	16,068
Hastings District	5,621	3,729	4,978	5,788	4,692	4,151	163	161	142	46	22	29,493
Napier City	0	0	0	0	0	1	0	6	0	0	0	7
Central Hawkes Bay District	268	115	144	191	1,927	911	181	174	83	27	15	4,036
Region total	13,223	4,245	7,945	8,184	8,054	6,700	444	360	324	85	40	49,604
Southern North Island wood supply region												
New Plymouth District	C	C	C	40	160	384	41	26	50	0	0	1,458
Stratford District	705	263	289	303	195	378	31	95	10	0	0	2,269
South Taranaki District	358	C	C	220	377	300	297	C	C	23	C	2,097
Wanganui District	696	633	632	567	445	543	32	105	98	0	9	3,760
Rangitikei District	654	574	258	276	2,538	1,107	69	67	176	148	25	5,892
Manawatu District	200	494	27	215	381	851	76	73	100	7	5	2,429
Kapiti Coast District	20	39	0	76	166	C	158	221	21	0	0	C
Upper Hutt City	217	529	549	338	613	442	275	198	175	25	10	3,371
Porirua City	3	0	45	6	0	147	237	5	64	0	0	507
Wellington City	0	0	0	0	16	23	19	0	0	0	0	58
Lower Hutt City	0	0	0	0	0	28	0	15	23	0	0	66
Palmerston North City	C	C	C	69	53	112	C	12	64	0	0	1,412
Tararua District	2,299	2,032	456	845	2,201	2,719	258	339	241	18	13	11,421
Masterton District	4,481	867	394	528	1,038	2,383	463	518	310	169	13	11,164
Horowhenua District	365	212	566	697	217	614	96	101	111	0	7	2,986
Carterton District	524	371	318	314	4,004	796	152	56	80	51	0	6,666
South Wairarapa District	C	577	57	465	558	1,213	579	174	168	23	2	C
Region total	13,124	6,813	4,168	4,959	12,962	C	C	C	C	464	C	61,421
North Island total	124,942	126,324	96,283	90,851	112,243	68,954	9,422	8,166	5,133	749	319	643,386

	Radiata pine unpruned without production thinning											Total [ha]
	Age class [years]											
	1-5 Years (ha)	6-10 Years (ha)	11-15 Years (ha)	16-20 Years (ha)	21-25 Years (ha)	26-30 Years (ha)	31-35 Years (ha)	36-40 Years (ha)	41-50 Years (ha)	51-60 Years (ha)	61+ Year (ha)	
Nelson and Marlborough wood supply region												
Nelson City	1,259	925	2,140	1,423	1,344	767	4	C	56	1	0	C
Tasman District	11,194	9,062	12,675	13,711	7,696	5,036	222	399	507	108	22	60,632
Marlborough District	5,936	10,511	6,093	4,566	4,410	7,098	466	677	520	71	28	40,376
Kaikoura District	C	0	0	12	30	C	1	16	14	0	2	727
Region total	C	20,498	20,908	19,712	13,480	C	693	C	1,097	180	52	C
West Coast wood supply region												
Buller District	730	624	537	146	81	39	C	37	65	4	0	C
Grey District	2,998	1,572	1,262	1,459	331	149	0	6	66	80	0	7,923
Westland District	671	752	1,207	605	258	32	8	0	376	15	1	3,925
Region total	4,399	2,948	3,006	2,210	670	220	C	43	507	99	1	C
Canterbury wood supply region												
Hurunui District	1,345	2,366	2,083	4,097	5,395	3,729	383	117	104	3	14	19,636
Waimakariri District	212	387	405	601	1,182	1,691	50	56	36	8	36	4,664
Christchurch City	467	404	281	293	244	413	156	89	111	5	23	2,486
Selwyn District	1,543	883	580	339	649	1,195	226	226	126	19	0	5,786
Ashburton District	103	240	339	174	135	196	11	44	0	8	21	1,271
Timaru District	1,320	120	141	66	183	881	255	63	8	11	0	3,048
Mackenzie District	126	9	19	23	63	212	21	12	45	14	2	546
Waimate District	752	593	467	249	602	558	83	93	39	20	26	3,482
Region total	5,868	5,002	4,315	5,842	8,453	8,875	1,185	700	469	88	122	40,919
Otago and Southland wood supply region												
Waitaki District	3,888	2,124	442	640	724	969	66	40	44	C	15	C
Dunedin City	1,038	2,848	1,760	236	87	699	90	99	55	0	13	6,925
Queenstown-Lakes District	0	0	0	10	13	25	11	6	13	1	26	105
Central Otago District	0	C	0	41	63	334	20	41	40	8	16	C
Clutha District	2,937	2,982	3,663	5,750	4,360	2,331	397	258	159	11	13	22,861
Gore District	64	0	6	35	321	451	34	21	35	20	1	988
Southland District	4,432	3,062	2,141	4,622	5,775	3,631	236	661	332	19	16	24,927
Invercargill City	21	0	32	6	6	34	31	8	2	4	0	144
Region total	12,380	C	8,044	11,340	11,349	8,474	885	1,134	680	C	100	65,521
South Island total	41,661	39,504	36,273	39,104	33,952	30,497	2,796	3,019	2,753	446	275	230,280
New Zealand total	166,603	165,828	132,556	129,955	146,195	99,451	12,218	11,185	7,886	1,195	594	873,666

Figure 24: Distribution of radiata pine unpruned without production thinning forest area by age class and island, as at 1 April 2022



Appendix 1: Glossary

Afforestation: 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.

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 2022 if it was planted in the preceding 12-month period, that is, between 1 April 2021 and 31 March 2022.

Confidentiality: Figures are considered confidential if the figure is made up of fewer than three owners' information or where one owner's data makes up more than 80 percent of the 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 is deemed confidential and one of the contributors to the confidential number is not prepared to waive the confidentiality rules, then that number is suppressed and secondary suppression is applied to other cells in the table; see Suppression (Secondary) below.

Clear fell: To harvest all merchantable trees within a specified physical area of land.

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.

Land cover types prior to afforestation:

- "Improved pasture" is land that contains improved pasture species, often used for grazing or animal feed, and/or has been fertilised.
- "Unimproved pasture" is land with no improved pasture species and that has not been fertilised.
- "Other woody land" is land predominantly covered in species such as bracken, gorse, mānuka, kānuka or other woody plant species.

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: See afforestation.

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 exotic (introduced) tree species.

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

Recoverable volume: The volume of a tree (in cubic metres) excluding, for example, non-recoverable volume such as stumps and the non-merchantable tops of stems, branches and bark.

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

Rotation number: The first rotation is a stand of forest planted on land not previously in planted 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.
- Eucalypt 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 recoverable volume (in cubic metres) of wood contained in all live crop stems of all age classes.

Suppression (primary): The removal of a cell's value when it has been deemed sensitive.

Suppression (secondary): The suppression of other cells or marginal totals in the table so that the suppressed cell cannot be derived.

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

*

Appendix 2: NEFD Steering Committee's Terms of Reference

The New Zealand Forest Owners Association (FOA), the New Zealand Farm Forestry Association (NZFFA), and the Ministry for Primary Industries (MPI) have agreed that the Steering Committee shall:

1. Oversee the preparation of each edition of the National Exotic Forest Description.
2. Engage with the sector to encourage a high response rate, monitor user satisfaction with the NEFD outputs, and identify ways to maintain the quality and relevance of the NEFD programme.
3. Advertise and promote the availability and value of NEFD information.
4. Produce a five-year strategic plan, which outlines long term strategies to maintain the quality of the information collected, ensures the NEFD remains relevant to all stakeholders, and plans for projects of a longer-term nature such as wood supply forecasts. This strategic plan needs to be submitted to the MPI Deputy Director-General of Policy and Trade, the FOA, and the NZFFA.
5. Prepare an annual work plan and budget for NEFD activity, detailing how the objectives of the strategic plan and the needs of stakeholders will be met. This work plan is to be submitted to the MPI Deputy Director-General of Policy and Trade, to the FOA, and the NZFFA by 15 May each year, with periodic progress reports during the year.
6. Prepare an annual report reviewing the year's work and achievements. This report is to be submitted to the MPI Deputy Director-General of Policy and Trade, to the FOA, and the NZFFA by 15 May each year.
7. Commission forecasts of future wood supply from New Zealand's planted production forests.
8. Ensure that all users are able to access NEFD reports and outputs on an equitable basis, with no barriers to access.
9. Advise the MPI Senior Leadership Team and the Board of the FOA of any significant issues that the Steering Committee is unable to resolve.

Appendix 3: NEFD Steering Committee

The NEFD Steering Committee currently comprises seven representatives nominated by the New Zealand Forest Owners Association, the New Zealand Farm Forestry Association, and the Ministry for Primary Industries. The current members are:

Member	Nominated By
Paul Nicholls (Chairman) Independent Consultant	New Zealand Forest Owners Association
Tim Clarkson Ministry for Primary Industries	Ministry for Primary Industries
Matt Dilly Ministry for Primary Industries	Ministry for Primary Industries
Egon Guttke New Zealand Farm Forestry Association	New Zealand Farm Forestry Association
Paul Lane Ministry for Primary Industries	Ministry for Primary Industries
Glen Mackie New Zealand Forest Owners Association	New Zealand Forest Owners Association
Bruce Manley School of Forestry, University of Canterbury	New Zealand Forest Owners Association

Appendix 4: 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.

Forest Growers Levy Trust Inc. (2019)
<http://www.fglt.org.nz/levy-statistics>

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

Manley, B (2018) *2018 Deforestation Survey*. University of Canterbury.
<https://www.teururakau.govt.nz/news-and-resources/open-data-and-forecasting/forestry/new-zealands-forests/>.

Ministry for Primary Industries (2019) *Annual Log and Roundwood Removal Statistics*.
<https://www.teururakau.govt.nz/news-and-resources/open-data-and-forecasting/forestry/wood-processing/>

Ministry for Primary Industries (2017). NEFD Regional Yield Tables 2015.
<https://www.teururakau.govt.nz/dmsdocument/30954-2015-yield-tables>

New Zealand Forest Service, 1975. *Statistics of the Forests and Forest Industries of New Zealand to 1974*, New Zealand Forest Service, Wellington, 1975.

New Zealand Forest Owners Association (2019) *New Zealand Forest Industry Facts & Figures 2018/2019*.
<https://www.nzfoa.org.nz/resources/publications/facts-and-figures>

Statistics New Zealand (2019) *2018 Agricultural Production Survey*.
<https://www.stats.govt.nz/information-releases/agricultural-production-statistics-june-2018-final>

Appendix 5: National Exotic Forest Description Technical Report

Version 2022

Introduction	47
Data collection	47
Comparing data collected from sources other than the NEFD	47
Reliability of data	47
Reliability of data from large-scale forest owners	47
Reliability of data from smaller scale owners	47
Reliability of data below national level	48
Quality assurance of NEFD survey data	48
Data for forests smaller than 40 hectares	48
New planting imputations 1992 to 2006	48
Assumptions	48
2004 AsureQuality small forest grower survey	49
Small owner estate	49
Scaling of planting and harvesting data in non-census years	49
Yield tables	49
NEFD survey template 2022	50

Introduction

This document provides a detailed overview of the methodology used for the National Exotic Forest Description (NEFD). It contains information on data collection and estimation, reliability of data, yield tables and imputation of data. For the most recent NEFD report, as well as past NEFD publications and other forestry related statistics, please visit the Te Uru Rākau - New Zealand Forest Service website: <https://www.teururakau.govt.nz/news-and-resources/open-data-and-forecasting/forestry/new-zealands-forests/>. For past copies please contact nefd@mpi.govt.nz.

Data collection

The NEFD surveys known forest owners and managers with at least 40 hectares of planted production forest. The survey runs on a two-yearly cycle, where all known foresters with 40 hectares of forest are surveyed one year, and only owners with 1,000 or more hectares the next (see NEFD survey cycle). Respondents either complete the survey via a postal survey or they can complete it online.

NEFD survey cycle

Year	2020	2021	2022
Survey frame	All known foresters with 40 or more hectares of forests	Only foresters with 1,000 or more hectares of forests ¹	All known foresters with 40 or more hectares of forests

Note

1. The survey is run as a census every two years, as approximately 70 percent of respondents report no change year to year. Large owners are surveyed every year, as they own approximately 70 percent of New Zealand's forests and are more likely to engage in planting and harvesting.

In addition to the data collected in the NEFD surveys, the results from the 2004 AgriQuality (nowASUREQuality) Small Forest Grower Surveys are used in the NEFD dataset. Details on the methods used by AgriQuality are available in the Small Forest Grower Survey Report (AgriQuality NZ, 2005). Harvest Information from the Forestry Production Statistics (FPS) survey is also presented along with NEFD data. Details for the FPS can be found on Te Uru Rākau – New Zealand Forest Service website: <https://www.teururakau.govt.nz/news-and-resources/open-data-and-forecasting/forestry/wood-processing/>

Comparing data collected from sources other than the NEFD

The figures released in the NEFD, and in particular, new planting estimates, differ from those produced from the Agricultural Production Survey collected by Statistics New Zealand. These surveys use different survey frames and methodologies and have different survey objectives.

The target population differs for the NEFD and the Agricultural Production Survey (APS). The APS surveys all businesses engaged in “agricultural production activity” (including livestock, cropping, horticulture, and forestry) or own land intended for agricultural activity. Detailed information on the population frame for the Agricultural Production Survey is available on the Statistics New Zealand website: <http://www>.

stats.govt.nz/survey-participants/a-z-of-our-surveys/agricultural-production-survey.aspx

The forest areas released in the NEFD may also differ from those produced in the New Zealand Land Use Map 1990-2016 (LUM v008) – see: <https://environment.govt.nz/facts-and-science/science-and-data/new-zealand-land-use-map/>. The NEFD reports net stocked area of planted production forest while the New Zealand Land Use Map reports gross forest area including areas that are not intended for timber production.

Sometimes harvested areas remain unstocked for up to three years before replanting occurs. Often these areas are not recorded year-to-year because the forest owners' tenancy ends at the completion of harvest and the land is returned to the land owners. The landowner or new tenant may not report the same areas in the NEFD survey until they are restocked.

This makes it difficult to reconcile changes in forest area between years. The year-to-year change in total planting minus the areas of deforestation and harvesting reported in the NEFD is therefore not a reliable measure of the total forest area.

Reliability of data

There are different levels of reliability associated with data from different scale forest owners. We are changing systems which may be a source of error for the 2022 survey.

Reliability of data from large-scale forest owners

Large-scale forest owners (those with 1,000 hectares or more) own 70 percent of the national forest estate. There are approximately 100 forest owners with more than 1,000 hectares of forest.

Data provided by these owners, and especially those with forests over 10,000 hectares, is considered the most reliable segment within the NEFD area dataset. Large-scale forest owners' forests are managed by professional staff and mapping work and forest inventories are conducted regularly in order to make well informed management decisions. The large-scale forest owners apply relatively consistent definitions of net stocked area.

Reliability of data from smaller scale owners

Smaller scale forest owners with forests of fewer than 1,000 hectares made up 30 percent of the national forest estate in 2021. There are approximately 1,600 forest owners with between 40 hectares and 999 hectares of forest. The quality of the data provided by owners with fewer than 1,000 hectares is likely to be more variable in nature.

For instance:

- Some owners may report the total land area originally taken out of pasture and put into forest without mapping out unstocked gaps. The difference between “gross” forest area and “net stocked” area is generally of the order of 10 to 20 percent.

- It is likely to have a higher degree of non-sampling error as it is more likely to contain reporting inaccuracies and responses based on forest owners' estimates.
- It is also generally not reported electronically, which increases the possibility of errors in reporting the data to MPI and in recording the data in the database.

There is also the possibility that the survey frame contains inaccuracies, which may also contribute to non-sampling error. MPI adopts procedures to detect and minimise non-sampling error, but these errors may still occur and are not easy to quantify.

Reliability of data below national level

Finer scale data, such as the area by age class at a territorial authority level, is likely to be less accurate than the total national forest area.

Forest areas are sometimes misallocated between adjacent territorial authorities. One way for users to minimise this problem, is to aggregate data from adjacent territorial authorities – particularly where contiguous forest areas straddle territorial authority boundaries.

NEFD data collection schedule

Forest ownership size (ha)	Survey frequency	Estimated data quality
1,000 ha or more	Annually	Good
40 ha to 999 ha	Every two years	Medium
40 ha	Infrequently	Low

Quality assurance of NEFD survey data

To minimise possible errors in the NEFD survey data, the following checks were made:

- Numeric data input was limited to certain maximum and minimum values for each entry.
- Aggregated area data was checked at the territorial authority level against the 2021 NEFD area dataset to ensure variation was within acceptable limits.
- For each owner, the data provided was compared with data provided by that owner in the previous surveys.
- The completeness of returns was checked, e.g. checking whether harvesting returns included both area and volume harvested.
- Reconciling related fields, e.g. checking that the new planted and replanted area matched the year one stock total.
- A sample of survey data was checked against the original returns to identify data entry errors.

In 2015 a new NEFD system came into use. This system has data quality checks built into data entry and has significantly reduced the number of data entry errors.

Despite the best efforts of the NEFD team some data may still be incorrect. For instance, it is possible that some owners included in the dataset may change their management objectives so an area that is reported as intended to be pruned may not end up being pruned.

Data for forests smaller than 40 hectares

Forest area data for forests smaller than 40 hectares comes from three sources, listed below in order of total area

represented:

1. New planting imputations from 1992 to 2006
2. A survey of small forest growers from 2004
3. Forests previously surveyed for the NEFD but which have dropped below 40 hectares.

More detail on these sources is provided below.

New planting imputations 1992 to 2006

Since 1992, MPI has conducted an annual forest nursery survey. This nursery survey measures the sales of planting stock from commercial forest nurseries. Details of how this survey is operated are described in Predicting and Measuring New Planting from Nursery Surveys (Eyre, 1995). An estimate of total national planting was calculated from the reported numbers of seedlings sold, and estimates of replanting and new planting are then derived. The nursery survey provides the most complete indicator of the area of new forest established each year. In recent years the nursery survey has only been used to estimate the total area of planting. New planting and replanting are not now estimated directly through the survey. The methodology was reviewed in 2003 (Manley et al, 2003), and stocking rate assumptions are reassessed every two years.

For the calendar years 1992 to 2006, additional new planting areas not directly captured in the NEFD surveys were estimated (imputed) based on the nursery survey and added to the NEFD dataset. No additional new planting was added for the 2007 to 2012 calendar years because of the very low levels of new forest planting that took place in those years. The NEFD report compares the new planting figures collected in the NEFD postal surveys with the nursery survey estimates.

The national new planting adjustments were then distributed into territorial authorities using the proportions indicated by the new planting as collected in the postal survey.

Within each territorial authority imputed, new planting was allocated to NEFD crop types using the postal survey results in the following way:

- The imputed new planting was allocated into species groups based on the relative proportions of each species group within the one to five year age class.
- For radiata pine, the imputed new planting was allocated into the four NEFD tending regimes, based on the relative proportion of each of these tending regimes across all the age classes.
- All the douglas-fir imputed new planting was allocated to the “without production thinning” tending regime.

Historically, imputed new planting estimates are revised each year, based on any new information on the area of young forest captured directly in the NEFD survey.

Assumptions

The inclusion of imputed new planting into the NEFD dataset makes the following assumptions.

- The new planting estimates from the nursery seedling surveys are the actual areas of new planting established between 1992 and 2006.

- The imputed new planting in each territorial authority occurs in the same proportion as the new planting captured in the NEFD surveys.
- Imputed new planting for radiata pine is assigned to the tending regimes in the same proportions as the radiata pine new planting captured in the NEFD surveys.

2004 AsureQuality small forest grower survey

In 2004 AsureQuality (then AgriQuality) used their AgriBase database of agriculture businesses to run a survey of small forest owners for MPI. The data from this survey was first included in the 2004 NEFD report, published in 2005. The original survey captured approximately 138,000 hectares of forest, including owners of forests smaller than 40 hectares and some with over 40 hectares not previously captured by the NEFD.

The data was used in aggregated form for the 2005 and 2006 reports. For 2007 onwards the under-40 hectare area was used in aggregate form, representing around 67,000 ha. Owners with 40 hectares or more were added to the core database of owners and sent surveys directly.

Small owner estate

Owners of small forests are classified as those with less the 40 hectares of forest. If a forest drops below the 40 hectare cut-off it is no longer part of the survey frame but the data is retained.

Scaling of planting and harvesting data in non-census years

In non-census years the planting and harvesting data is scaled up to estimate the values from the sub-1,000 hectare forest estate. The approach used since 2009 is as follows, using replanting as an example. The same logic is applied to all planting and harvesting variables.

1. For the previous census year, divide the total replanting by the replanting for forests 1,000 hectares and above.
2. Multiply the current year's replanting by the result of (1).

There are some key assumptions.

- The proportion of sub-1,000 hectare planting and harvesting will be similar from one year to the next.
- The previous census year was not unusual.

Scaling up is only done at the total level and the radiata pine levels. There is too much variability in the smaller species, relating to the above assumptions, to make this a reliable method.

Worked example for replanting.

- Census year total replanting – 1,000 ha
- Census year 1,000+ hectare replanting – 800 ha
- Current year total replanting – 900 ha

$$\begin{aligned}
 \text{Scaled replanting} &= \text{current year} * (\text{census year} \\
 &\quad \text{total/census year 1,000 +}) \\
 &= 900 * (1,000/800) \\
 &= 900 * 1.25 \\
 &= 1,125
 \end{aligned}$$

Yield tables

Standing volumes from the 2021 NEFD onwards have been calculated using the yield tables produced during the 2014/15 Wood Availability Forecasting project. From 2014 to 2017 the 2005 to 2009 tables were used. Prior to 2014, the yield tables from the 1995 Wood Availability Forecasting project were used. Moving to the more recent yield tables provides greater accuracy and relevance of the figures produced.

The yield tables were produced principally using data provided in 2014 by owners with extensive areas of forest. Data was collected from these owners because their holdings covered most districts in New Zealand – they made up much of the forest resource and they had the most suitable yield data in New Zealand. For further details on the NEFD yield tables, refer to the 2014/15 Wood Availability Forecasts.

The impact of moving from the 2009 to the 2014 yield tables, is a lower standing volume per hectare. This is due to more attention being paid to realised volumes, which incorporates events such as incremental wind throw and crop failure, compared to previous models.

ANNUAL SURVEY FOR NATIONAL EXOTIC FOREST DESCRIPTION AS AT 1 APRIL 2022

Ministry for Primary Industries
Manatū Ahu Matua



Please complete and return this questionnaire no later than **15 August 2022**

Why is this survey important?

This survey is used to maintain a database of New Zealand's planted exotic production forests. This information is used extensively by government and the wider forestry sector for wood availability forecasting, infrastructure planning, and for developing policy which impacts the forestry sector. The survey is split into the following four sections:

Section A

This section asks you to check your contact details.

Section B

This section collects forest area by age data.

Section C

This section records changes in forest area and collects information on planting, harvesting, and land use change.

Section D

This section asks for future plans on your forest, and for emergency contact consent.

Confidentiality and Privacy

All responses to this survey will be treated as confidential and will only be used for statistical purposes. Personal details provided by individual forest owners and managers are seen only by people directly involved with running the survey.

This information is collected under the statistical provisions of the Forests Act 1949. For a copy of our full Privacy Statement, please email us at nefd@mpi.govt.nz.

For assistance please contact: NEFD SURVEY SUPPORT

Telephone: 0800 008 333

Email: nefd@mpi.govt.nz

Mail: NEFD Survey Support, Ministry for Primary Industries, PO Box 2526, Wellington 6140

You should receive a separate survey for each of your forest entities. If you are missing any forest entities please let us know.

Section A: Contact Details

Work through the questions in this section and only fill in the information you need to complete.

A1 Please check the front cover of the survey to see if your contact information is correct. If any changes need to be made please add them below.

Contact Name	
Company Name	
Contact Address	
Phone Number	
Email Address	

A2 Please enter the details of the forest owner you are completing this survey for. We use this information to make sure we are not double counting forests.

Forest Owner's Name	
Company Name	
Contact Address	
Phone Number	
Email Address	

A3 Please supply the location data about your forest. There is extra space on the next page if required.

Forest Address (if you have multiple forest locations please supply each individual address)	
LINZ Parcel ID or Title Number (if you have multiple forest locations please supply each individual ID)	

A4

Tick one option only.
Which best describes the ownership of this forest?

- | | |
|---|--|
| <input type="checkbox"/> Privately Owned | <input type="checkbox"/> Registered Public Company |
| <input type="checkbox"/> Local Government | <input type="checkbox"/> Central Government |
| <input type="checkbox"/> State Owned Enterprise | <input type="checkbox"/> Other (please specify) |
| <input type="checkbox"/> Māori Trust | _____ |

Please use this space to write any further information for Section A.

Section B: Area by Age as at 1 April 2022

In this section we get you to check and provide the net stock area by age data for your forests.

Section B, page 6 to Section C shows the pre-printed area by age data we have for your forests. Please check this information and make any changes if it is incorrect.

To give us information on new (or missing) forests, fill in B1-B7 on pages 4 and 5. Print these pages for each forest separated by Territorial Authority, rotation, species, and regime; or contact us if you would like us to supply these.

B1 If you have pre-printed pages attached to this survey, tick yes and follow the instructions below. Tick no if you have any forest area that is not included in the pre-printed pages, see end of Section B for these.

- Yes ▶ Check the information on these pages is correct.
If there are any errors, please make corrections on the page. If there are no errors, or you don't have any additional forest area go to Section C.
- No ▶ Answer questions B2 to B7

B2 Write the Territorial Authority (District Council) where the forest is located, in the box below:

B3 Tick one option only. Which rotation is this?

- First rotation (area planted in forest for the first time)
- Second or subsequent rotation (area planted following harvesting of existing planted forest)

B4 Tick one option only. Which species is this information for?

- Radiata pine ▶ Go to **B5**
- Douglas-fir ▶ Go to **B6**
- Cypress
- Other Softwoods
- Eucalypt
- Other Hardwoods
- Go to **B7**

B5 Tick one option in each category. What is your Radiata pine tending regime?

Pruning Regime

- Pruned
 Unpruned

Thinning Regime

- Production Thinned
 No Production Thinning

Go to **B7**

B6 Tick one option only. What is your Douglas-fir tending regime?

- Production Thinned
 No Production Thinning

Go to **B7**

B7 As at 1 April 2022, input the net stocked area in hectares of trees of each age

		Net Area (HA)			Net Area (HA)			Net Area (HA)
Year Planted	Tree Age in 2022	As at 1 April 2022	Year Planted	Tree Age in 2022	As at 1 April 2022	Year Planted	Tree Age in 2022	As at 1 April 2022
2021	1		1993	29		1965	57	
2020	2		1992	30		1964	58	
2019	3		1991	31		1963	59	
2018	4		1990	32		1962	60	
2017	5		1989	33		1961	61	
2016	6		1988	34		1960	62	
2015	7		1987	35		1959	63	
2014	8		1986	36		1958	64	
2013	9		1985	37		1957	65	
2012	10		1984	38		1956	66	
1993	11		1983	39		1955	67	
2010	12		1982	40		1954	68	
2009	13		1981	41		1953	69	
2008	14		1980	42		1952	70	
2007	15		1979	43		1951	71	
2006	16		1978	44		1950	72	
2005	17		1977	45		1949	73	
2004	18		1976	46		1948	74	
2003	19		1975	47		1947	75	
2002	20		1974	48		1946	76	
2001	21		1973	49		1945	77	
2000	22		1972	50		1944	78	
1999	23		1971	51		1943	79	
1998	24		1970	52		1942	80	
1997	25		1969	53		1941 or Prior	80+	
1996	26		1968	54				
1995	27		1967	55				
1994	28		1966	56				
						Total Area		

Section C: Planting and Harvesting

Planting

You will need to supply separate responses for C1 to C4 for planting in each Territorial Authority. Print this page for each Territorial Authority, or contact us if you would like us to supply these.

C1 For the year ended 31 December 2021,
Was there any planting done in this forest entity?

Yes ▶ Go to **C2**

No ▶ Go to **C5**

C2 Write the Territorial Authority (District Council) where the forest is located, in the box below:

C3 Complete the table below for planted and replanted forest area, for the year ended 31 December 2021. (see glossary for species specification)

	New planted area	Replanted area
Radiata pine	ha	ha
Douglas-fir	ha	ha
Cypress	ha	ha
Other Softwoods	ha	ha
Eucalypt	ha	ha
Other Hardwoods	ha	ha
Total	ha	ha

C4 For the new planted area, what was the land previously used for?
Take the number from the highlighted Total box in C3 and place it in the highlighted Total box below, then separate it into categories of pasture and vegetation.

Improved Pasture Land that has been fertilised and contains improved pasture species	ha
Unimproved Pasture Land not fertilised, with no improved pasture species sown	ha
Woody Vegetation Land predominately covered in broken gorse, manuka, kanuka or other woody	ha
Total This should equal the highlighted total 'New planted area' in question C3	ha

Harvesting

You will need to supply separate responses for C5 to C8 for harvesting in each Territorial Authority. Print this page for each Territorial Authority, or contact us if you would like us to supply these.

C5 For the year ending 31 March 2022,
Did you carry out any harvesting for this forest entity?

Yes ▶ Go to **C6**

No ▶ Go to **C9**

C6 Write the Territorial Authority (District Council) where the forest is located, in the box below:

C7 For the year ended 31 March 2022, please give the following harvesting details:

	Area clear felled <small>include any salvage logging of windthrown or other damaged trees</small>	Clear felled volume <small>the recovered volume of wood (inside bark) from harvesting or clear felling (see glossary for details)</small>	Average age clear felled (area-weighted) <small>the average age of harvested stands weighted by the area of each stand (see glossary for details)</small>	Production thinning volume (recovered) <small>the recovered volume of wood (inside bark) from thinning for commercial use (see glossary for details)</small>
Radiata Pine	ha	m3	years	m3
Douglas-fir	ha	m3	years	m3
Cypress	ha	m3	years	m3
Other Softwoods	ha	m3	years	m3
Eucalypt	ha	m3	years	m3
Other Hardwoods	ha	m3	years	m3

C8 Write the number from the Radiata pine clear felled volume highlighted above in C7 into the highlighted 'Total' box below. Then separate it into log grade sold.

Export logs should be included in the log grades e.g. if a pruned log is exported as an unpruned grade, please record as 'unpruned' (see glossary for definitions).

Volume (recovered) sold as $\frac{\text{Pruned Logs}}{\text{m3}} + \frac{\text{Unpruned Logs}}{\text{m3}} + \frac{\text{Pulp/chip logs}}{\text{m3}} = \frac{\text{Total}}{\text{m3}}$

Harvested Land

You will need to supply separate responses for C9 to C13 for harvested land activities in each Territorial Authority. Print this page for each Territorial Authority, or contact us if you would like us to supply these.

C9 On 31 March 2022, was any previously forested land awaiting replanting, awaiting a land use decision, or converting to a non-forest land use?

Yes ▶ Go to **C10**

No ▶ Go to **Section D**

C10 Write the Territorial Authority (District Council) where the forest is located, in the box below:

C11 On 31 March 2022, what area of land in this Territorial Authority was awaiting replanting?

Include area clear felled and intended to be replanted which has not yet been replanted
Don't include land handed back to the landowner

 ha

C12 On 31 March 2022, what area of land in this Territorial Authority was awaiting a land use decision?

Include area clear felled for which a decision on whether to replant or convert has not yet been made.
Don't include any area given in the replanting above, or land handed back to the landowner.

 ha

C13 On 31 March 2022, what area of land in this Territorial Authority was converting to a non-forest land use?

Include land that was in the process of being converted to non-forest land use.
Don't include land handed back to the landowner.

 ha

Section D: Emergency Contact, Future Plans, and Feedback

D1 I agree to the Ministry for Primary Industries sharing my contact details with:

- Fire and Emergency NZ in case of a fire or emergency, and
- Biosecurity NZ in case of a biosecurity concern (pest incursion or similar)

in accordance with the Privacy Act 2020.

Yes

No

D2 This question is about your future plans for this forest. We'd like to know whether or not you intend to harvest your forest when it reaches maturity.

We are just looking for your best guess. This will help us make wood availability forecasts more accurate.

Approximately how many hectares in this forest are:

Likely to be harvested

Include any forest likely to be harvested at maturity.

ha

Unlikely to be harvested - carbon

Include any forest area intended to be a permanent carbon forest and is unlikely to be harvested.

ha

Unlikely to be harvested - other

Include any forest area unlikely to be harvested for any other reason (uneconomic or impractical to harvest, erosion control, etc).

ha

