



Provisional Estimates of Tree Stock Sales and Forest Planting in 2019

PURPOSE

This report provides the provisional estimates of the sales of tree stocks and the areas of commercial forest planted in 2019. It also provides an estimate of mānuka seedling sales and the area planted.

BACKGROUND

Each spring the Ministry for Primary Industries (MPI) undertakes a survey of tree stock sales from commercial forestry nurseries. The results are aggregated to produce estimates of total national sales, and then modelled to estimate the area of planting by species, species groups, and total area.

In 2019, all of the 25 commercial forestry nurseries completed the survey. Ten nurseries undertaking bulk sales of mānuka seedlings also completed the survey. (Some of which are also commercial forestry nurseries).

TREE STOCK SALES

Tree stock sales reported in 2019 totalled 88.8 million seedlings, compared to 59.9 million sold in 2018. The main increase was in radiata pine where sales rose by 27.4 million seedlings (48 percent), and notably in Stand Select. Table 1 provides a breakdown of sales since 2011, by species and species groups.

Table 1: Tree Stock Sales from 2011 to 2019 (millions)

	2011	2012	2013	2014	2015	2016	2017	2018	2019 ^p
Radiata pine	58.9	64.6	48.5	47.2	45.8	49.3	48.0	56.6	84.0
Douglas-fir	5.1	4.0	3.1	1.9	2.0	2.2	2.0	1.4	1.9
Other softwoods	1.3	1.3	0.7	0.8	0.5	0.4	0.7	0.9	1.4
All hardwoods	2.3	2.6	1.9	0.9	1.3	0.8	0.7	1.0	1.5
TOTAL	67.6	72.5	54.1¹	50.8	49.5¹	52.7	51.3¹	59.9	88.8

p Provisional.

Note

¹ Individual entries may not add up to totals due to rounding to the nearest 100,000.

RADIATA PINE

Annual radiata pine tree stock sales by categories are shown in Table 2.

Table 2: Radiata Pine tree stock sales from 2003 to 2019 (millions)

Year		GF < 14	GF 14 – 19	GF > 19	Cuttings	GF Plus	TOTAL ¹
2003		0.1	14.6	7.6	14.0	11.2	47.4
2004		less than 0.1	13.8	4.8	16.0	8.8	43.5
		GF < 14	GF 14 – 19	GF > 19	Cuttings/clones		
2005		less than 0.1	9.0	10.6	12.9		32.6
2006		less than 0.1	7.6	11.3	9.9		28.8
2007		0.1	11.2	17.2	8.1		36.7
2008		0.3	11.7	15.4	8.8		36.2
2009		0.2	10.9	17.0	9.6		37.7
	Stand Select ²	GF < 14	GF 14 – 19	GF > 19	Cuttings/clones		
2010	1.9	1.1	17.6	13.2	12.6		46.4
2011	12.2	0.4	16.1	16.8	13.4		58.9
2012	16.6	0.7	15.1	20.3	11.9		64.6
2013	9.9	less than 0.1	9.1	17.1	12.3		48.5
2014	5.8	0.2	11.6	14.5	15.1		47.2
2015	4.4	0.2	10.1	17.1	14.0		45.8
2016	3.4	less than 0.1	11.0	20.6	14.3		49.3
		(Under open pollinated)	Open pollinated	Control pollinated	Cuttings/clones		
2017	3.1		9.4	21.3	14.2		48.0
2018	4.1		13.3	23.6	15.6		56.6
2019	24.6		16.2	26.4	16.8		84.0

Notes

1. Individual entries may not add up to totals due to rounding to the nearest 100,000.
2. Stand select seed is collected by Radiata Pine Breeding Company shareholders in accordance with a set of criteria that authenticate the seed source and the genetic quality of that source.

Table 3 provides a breakdown of radiata pine planting between control pollinated stock plus cuttings and clones, and open pollinated stock plus Stand Select. The trend seen between 2011 and 2017 of an increasing focus on control pollinated seedlings plus cuttings and clones in the percentage of the area planted was not maintained in 2018, although total sales of control pollinated radiata pine and cuttings/clones increased. In 2019 this trend change has been more dramatic, due primarily to the large increase in sales of Stand Select seedlings.

Table 3: Estimated percentages of total area of Radiata Pine planting by categories

Radiata pine Rating	2011	2012	2013	2014	2015	2016	2017	2018	2019 ^p
Open pollinated seedlings and stand select	49	48	38	36	31	28	25	30	49
Control pollinated seedlings, cuttings/clones	51	52	62	64	69	72	75	70	51

p Provisional.

FOREST PLANTING

The total area of forest planting in the winter of 2019 is provisionally estimated from the nursery survey data and associated modelling to be 85,000 hectares. The modelling generated national average stocking rates for radiata pine of 1044 stems per hectare for open pollinated plus Stand Select, and 962 stems per hectare for control pollinated plus cuttings and clones.



Table 4: Estimated areas¹ planted in 2019 by species and species groups²

Species/species group	Area (hectares)	Percentage of total area
Radiata pine	82,000	96
Douglas-fir	1,000	1
Other exotic softwoods	1,000	1
All exotic hardwoods	1,000	1
TOTAL	85,000	99

Notes

1. The estimated areas in Table 4 have been rounded to the nearest 1000 hectares or recorded as less than 1000 hectares where the area is between 1 and 999 hectares.
2. These figures may vary from the NEFD, as the NEFD only includes forests of over 40 hectares in the survey frame.

The total area of new planting in 2019 is estimated to be in the order of 22,000 hectares. This is based on a separate survey of large-scale forest owners and managers, and information from Te Uru Rākau for Crown Forestry and smaller-scale owners under forestry grant schemes.

Replanting of harvested areas is provisionally estimated to be 63,000 hectares in 2019. This is the residual area from the estimated total area of planting (85,000 hectares) minus the estimated area of new planting (22,000 hectares).

The total areas of new planting and replanting by species and species groups for 2019 are provided in Table 5. These allocations are based on the estimated percentage of total planting accounted for by each species or species group.

Table 5: Estimated areas¹ (hectares) of new planting and replanting for 2019 (provisional)

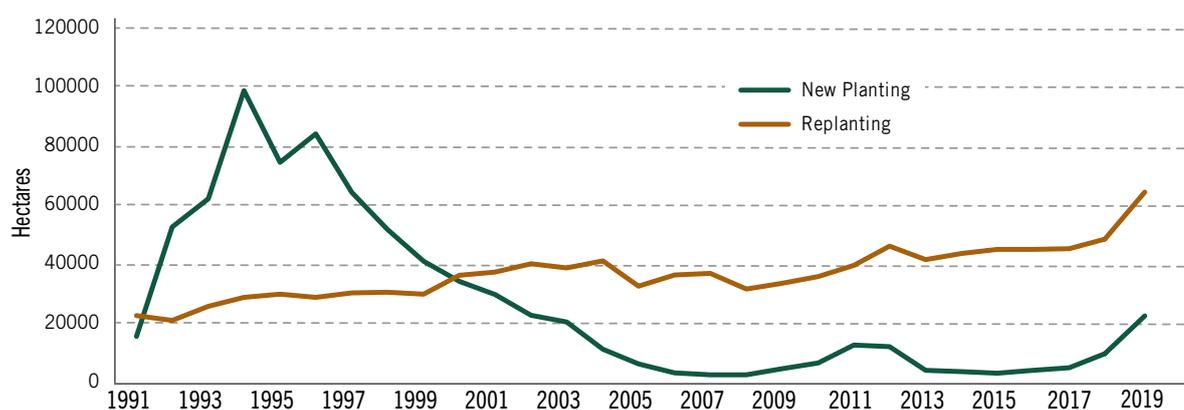
Species/species group	New Planting	Replanting
Radiata pine	21,000	60,000
Douglas-fir	less than 1,000	less than 1,000 ²
Other exotic softwoods	less than 1,000	less than 1,000
All exotic hardwoods	less than 1,000	less than 1,000
TOTAL	22,000	63,000

Notes

1. The estimated areas are either rounded to the nearest 1000 hectares or recorded as less than 1000 hectares where they are between 1 and 999 hectares.
2. May include harvested areas of radiata pine replanted with Douglas-fir.

Figure 1 provides a visual outline of the estimated areas of new planting and replanting since 1991.

Figure 1: Estimated areas of new planting and replanting



Estimates for 2019 are provisional.

LOOKING TOWARDS 2020

The 2019 nursery survey asked commercial forestry nursery managers about anticipated sale levels in 2020. The bulk of the nurseries responded to this question, and their feedback indicates that total seedlings sales may reach 100 million in 2020.

REVIEW OF 2019 PLANTING ESTIMATES

The nursery survey and the associated modelling are only intended to provide early approximations of the areas of total planting and planting by species or species groups for the year. These are subsequently revised as necessary when data are received directly from forest owners through the annual survey for the National Exotic Forest Description (NEFD).

PROVISIONAL ESTIMATES FOR MĀNUKA

This is the fourth year that MPI has gathered information on mānuka seedling sales to estimate the area planted. Twelve nurseries were identified as undertaking bulk sales of mānuka, of which ten provided sales information.

It is estimated that 6.9 million mānuka seedlings were sold, mostly for the honey industry, some for revegetation and some for research on mānuka oil production. This is a small decrease in sales compared to 2018 (7.1 million seedlings).

MPI has re-assessed the stocking rates used in calculating the planted area based on the latest available industry information, in particular the planting rates for commercial honey establishment. This results in a small increase in the estimated planted area for 2019 of 4800 hectares, compared to the 2018 estimate of 4600 hectares.

ACKNOWLEDGEMENTS

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FOR MORE INFORMATION

John Novis
MPI, Policy and Trade Branch (Christchurch)
Phone: 03 943 1708
Email: john.novis@mpi.govt.nz

Parnell Trost
MPI, Policy and Trade Branch (Christchurch)
Phone: 03 951 4705
Email: parnell.trost@mpi.govt.nz

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Publications Logistics Officer
Ministry for Primary Industries
PO Box 2526, Wellington 6140
www.mpi.govt.nz
Email: brand@mpi.govt.nz
Telephone: 0800 00 83 33

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