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## Provisional Estimates of Tree Stock Sales and Forest Planting in 2011

### Purpose

1. *This report provides the provisional 2011 estimates of the sales of tree stocks and the areas of forest planted.*

### Provisional Estimates

2. The provisional estimates are based on returns from 27 of the 29 forestry nurseries covered by this annual survey. The previous year's data have been used for the remaining two nurseries. The results will be revised when/if the remaining returns are received, but this is not expected to cause significant changes to the estimates recorded below.

### Background

3. Each spring the Ministry of Agriculture and Forestry (MAF) undertakes a survey of tree stock sales from commercial forestry nurseries. This information is then used in a model to generate estimates of planting by species or species groups, and a total area planted.

### Tree Stock Sales

4. Tree stock sales reported in 2011 totalled 67.6 million seedlings compared to 53.2 million seedlings sold in 2010. Breakdowns by species and species groups, and sales since 2004, are provided in Table 1.

**Table 1: Tree Stock Sales for 2004 to 2011 (millions)**

	2004	2005	2006 <sup>1</sup>	2007	2008	2009	2010	2011p
Radiata pine	43.5	32.6	28.8	36.7	36.2	37.7	46.4	58.9
Douglas fir	7.2	4.1	2.8	2.9	2.3	3.0	3.6	5.1
Other softwoods	1.2	1.7	1.8	1.7	1.5	1.5	1.3	1.3
All hardwoods	2.3	0.7	0.6	1.1	1.2	1.0	1.9	2.3
<b>TOTAL</b>	<b>54.2</b>	<b>39.1</b>	<b>34.0</b>	<b>42.4</b>	<b>41.2</b>	<b>43.2</b>	<b>53.2</b>	<b>67.6</b>

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Note: 1. Reported tree stock sales in 2006 are too low to support the NEFD reported area of planting for that year.

## Radiata Pine

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

**Table 2: Radiata Pine Tree Stock Sales from 2003 to 2011 (millions)**

Year	GF < 14	GF 14 - 19	GF > 19	Cuttings	GF Plus	Total <sup>1</sup>
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
	<b>GF &lt; 14</b>	<b>GF 14 - 19</b>	<b>GF &gt; 19</b>	<b>Cuttings/clones</b>		
2005	less than 0.1	9.0	10.6	12.9		32.6
2006 <sup>2</sup>	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
	<b>GF &lt; 14</b>	<b>GF 14 - 19</b>	<b>GF &gt; 19</b>	<b>Cuttings/clones</b>	<b>Stand Select</b>	
2010	1.1	17.6	13.2	12.6	1.9	46.4
2011	0.4	16.1	16.8	13.4	12.2	58.9

Notes: 1. If the total does not equal the sum of the component cells it is due to rounding of each cell to the nearest 100,000.

2. Reported tree stock sales in 2006 were too low to support the NEFD reported area of planting for that year.

6. The percentages of the estimated areas planted with radiata pine tree stocks with a Growth and Form (GF) rating of 20 or more and with a GF rating of 19 or less (and Stand Select) are provided in Table 3.

**Table 3: Percentage of Total Area of Radiata Pine Planting by GF Category**

Radiata pine GF Rating	2004	2005	2006	2007	2008	2009	2010	2011p
Seedlings ≤ GF19	28	23	26	31	31	28	44 <sup>1</sup>	49 <sup>1</sup>
Seedlings / cuttings ≥ GF20	72	77	74	69	69	72	56	51

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Note: 1. Includes Stand Select.

## Forest Planting

7. The total area of forest planting in the winter of 2011 is provisionally estimated by the nursery survey-based model to be 60,000 hectares.

**Table 4: Total Areas Planted in 2011 by Species and Species Groups**

Species / species group	Area (hectares) <sup>1</sup>	Percentage of total area
Radiata pine	54,000	90
Douglas fir	3,000	5
Other exotic softwoods	less than 1,000	1
All exotic hardwoods	2,000	3
Total	60,000	99 <sup>2</sup>

- Notes: 1. The estimated areas in Table 4 have been rounded to the nearest 1,000 hectares or recorded as less than 1,000 hectares where the area is between 1 and 999 hectares.  
2. Rounding error.

8. From a separate survey of large-scale forest owners, combined with information from the Afforestation Grant Scheme and the East Coast Forestry Project, it is provisionally estimated that there were 12,000 hectares of new planting in 2011.
9. Replanting of harvested areas is provisionally estimated to be 48,000 hectares in 2011. This is the residual area from the estimated total area of planting (60,000 hectares) minus the estimated area of new planting (12,000 hectares).
10. The total areas of new planting and replanting allocated by species and species groups for 2011 and 2010 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 Areas<sup>1</sup> of New Planting and Replanting for 2009 and 2010**

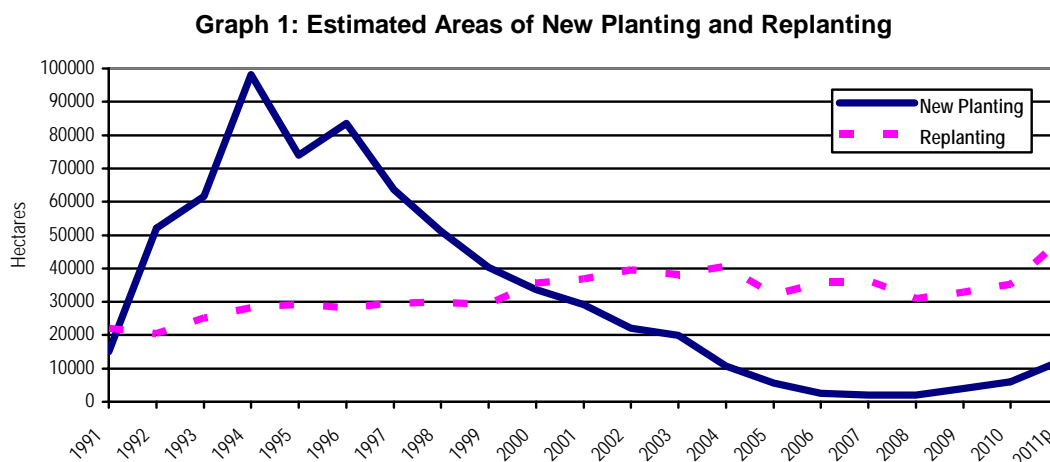
	New Planting (hectares)		Replanting (hectares)	
	2010	2011 <sup>p</sup>	2010 <sup>r</sup>	2011 <sup>p</sup>
Radiata pine	5,000	11,000	32,000	43,000
Douglas fir	less than 1,000	less than 1,000	2,000	2,000
Other exotic softwoods	less than 1,000	less than 1,000	less than 1,000	less than 1,000
All exotic hardwoods	less than 1,000	less than 1,000	1,000	1,000
<b>TOTAL<sup>2</sup></b>	<b>6,000</b>	<b>12,000</b>	<b>35,000<sup>3</sup></b>	<b>48,000</b>

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- Notes: 1. The estimated areas in Table 5 are either rounded to the nearest 1,000 hectares or recorded as less than 1,000 hectares where they are between 1 and 999 hectares.  
2. The sums of the component areas do not necessarily equal the total areas as a result of rounding to the nearest 1,000 hectares or recording as less than 1,000 hectares.

3. The 2010 estimate of replanting has been revised on the basis of the 2011 NEFD survey from 41,000 hectares to 35,000 hectares.

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



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## Looking Towards 2012

12. The 2011 nursery survey asked nursery managers whether they expect sales in 2012 to be similar to, lower or higher than, 2011. Of the 22 nurseries that responded, 1 indicated that they expect sales to be lower, 6 indicated they expect sales to be at similar levels, and 15 indicated they expect sales to be higher in 2012.

## Review of Planting Estimates in 2012

13. 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 reviewed and revised as necessary when data are received directly from forest owners through the annual survey for the National Exotic Forest Description (NEFD).

## Acknowledgements

14. MAF wishes to express its thanks to all the nursery managers who supplied information in 2011 that enables these estimates of tree stock sales and planting rates to be made.

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