

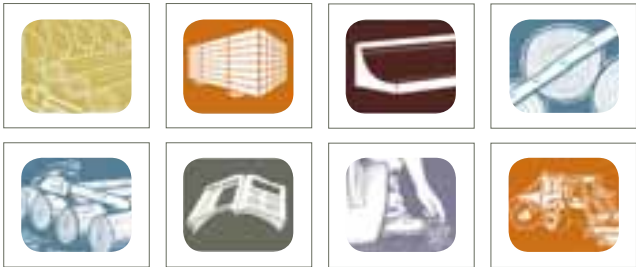
**NEW ZEALAND PLANTATION
FOREST INDUSTRY**

FACTS & FIGURES



2009/2010

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76 mt

NZ emits approximately 76 million tonnes of CO₂ equivalent per annum, and 76 million NZUs are required to fully offset this level of emissions.

\$877 M

Log export volumes over the year ending June 2009 increased 26.1% to 7.6 million m³ with an increase in export earnings of 57.6% to \$NZ877 million when compared with the June 2008 year. The considerable rise in log export volumes can be attributed to increased demand from China.

19.5 Mm³

The total volume of logs harvested over the year ending June 2009 increased 3.3 percent when compared with the June 2008 year to 19.5 million m³.

Contents

| | |
|---|----|
| Foreword | 3 |
| New Zealand planted forestry in summary | 4 |
| New Zealand economic indicators | 5 |
| New Zealand land use 2009 | 5 |
| Employment in forestry and processing activities | 6 |
| Net stocked area of radiata pine | 6 |
| Where the plantation forests are | 7 |
| Global forest areas by main regions (2005) | 8 |
| New Zealand planted forest ownership/management | 9 |
| Plantation forest ownership | 10 |
| New forest planting and deforestation since 1997 | 11 |
| Location of major wood processors by wood supply region | 12 |
| Plantation forest harvest | 14 |
| Forest management trends – radiata pine | 14 |
| Typical log out-turn | 15 |
| Log flow in the New Zealand forestry industry | 16 |
| Where the log harvest goes | 18 |
| Wood pulp, paper and paperboard production | 19 |
| Lumber production and exports | 20 |
| Panel products production | 20 |
| Major export earners | 21 |
| Top export destinations | 22 |
| Exports of forestry products from New Zealand | 25 |
| Production and exports of selected forestry products | 26 |
| Value of exports by product and destination | 28 |
| Log exports by port | 30 |
| Sawn timber exports by port | 30 |
| Proportion of New Zealand's 1.75 million ha plantation certified by FSC | 31 |
| Forest industries training statistics | 32 |
| Trainees and apprentices by sector | 32 |
| Trainees and apprentices by region | 32 |
| Trainees and apprentices by ethnicity | 33 |
| Qualifications completed by ethnicity | 33 |
| Agreements and Accords | 34 |
| NZ Wood: forests and wood fight climate change | 36 |
| Major New Zealand forestry species | 37 |
| New Zealand Forest Owners' Association strategic plan | 38 |
| Terms and things | 39 |
| Carbon emissions and sequestration | 40 |
| Carbon emissions by key sectors and forest sequestration | 41 |
| Carbon yield: multiple rotations | 42 |
| Export and domestic log pricing | 43 |
| Log pricing data | 44 |

Foreword



The forestry industry is hugely important to the New Zealand economy. The primary sector is our growth engine – and forestry and wood processing are a vital part of this.

Commercial forestry is currently New Zealand's third largest export earner, at \$3.7 billion, contributing 2.8% to GDP. The forestry sector has enormous potential for economic growth and innovation.

Potential wood availability in 2025 is a little over 35 million cubic metres. Given the current harvest is around 20 million cubic metres this gives a potential increase in volume of 75%.

Domestic use will absorb only a small proportion of this projected growth which is why the industry, together with the Government, needs an even stronger focus on export markets.

This effort will be assisted by the Primary Growth Partnership which will see significant investment in research and innovation programmes across the primary sectors.

Programmes will be co-funded by Government and industry with \$30 million in Crown funding available in the 2009/10 financial year, growing to \$70 million by 2012/13 – and ongoing.

I believe the Primary Growth Partnership has the potential to transform the primary sectors in New Zealand.

Forestry and wood products have unique environmental credentials and the industry is founded on a renewable resource. Government and industry efforts must be directed towards realising these benefits for all New Zealanders.

Growth in the forestry sector equals growth for New Zealand.

A handwritten signature in black ink, appearing to be 'D. Carter', written over a thin horizontal line.

Hon David Carter
Minister of Forestry

New Zealand and Planted Forestry in Summary

| Area and standing volume statistics | 1 April '07 | 1 April '08 ¹ | 1 April '09 ^P |
|---|------------------------------|------------------------------|------------------------------|
| Net stocked forest area (ha) | | | |
| Total estimated area | 1,790,000 | 1,761,000 | 1,751,000 |
| Growth characteristics | | | |
| Standing volume (000 m ³) | 434,039 | 445,933 | 456,874 |
| Average standing volume (m ³ /ha) | 242 | 253 | 261 |
| Area-weighted average age (years) | 14.8 | 15.2 | 15.6 |
| Area by species (ha) | | | |
| Radiata pine | 1,597,000 | 1,575,000 | 1,568,000 |
| Douglas-fir | 113,000 | 111,000 | 109,000 |
| Cypress species | 8,000 | 9,000 | 9,000 |
| Other exotic softwoods | 27,000 | 26,000 | 26,000 |
| Eucalyptus species | 29,000 | 25,000 | 25,000 |
| Other exotic hardwoods | 16,000 | 15,000 | 13,000 |
| Planting statistics | | | |
| | Year ended 31 Dec '06 | Year ended 31 Dec '07 | Year ended 31 Dec '08 |
| New planting (ha) | | | |
| Total estimated new planting ³ | 2,600 | 2,400 | 1,100 |
| Restocking | 34,400 | 34,700 | 29,500 |
| Harvested area awaiting restocking | 35,600 | 47,500 | 43,700 |
| Harvesting statistics⁴ | | | |
| | Year ended 31 Mar '07 | Year ended 31 Mar '08 | Year ended 31 Mar '09 |
| Harvesting (ha) | | | |
| Area clear felled (ha) | 43,000 | 41,400 | 41,800 ⁵ |
| Volume clear felled (TRVIB ⁴ 000 m ³) | 19,075 | 18,663 | 19,192 ⁵ |
| Volume production thinned (TRVIB ⁴ 000 m ³) | 251 | 195 | 190 ⁵ |
| Total volume removed (TRVIB ⁴ 000 m ³) | 19,326 | 18,858 | 19,382 |
| Average clear fell yield (m ³ /ha) | 444 | 451 | 459 |
| Area-weighted average clear fell age for radiata pine (years) | 28.1 | 27.9 | 28.3 |
| Estimated planted forest roundwood removal (000 m ³) ⁶ | 19,897 ^r | 20,388 | 18,847 |

Notes:

¹ Source: *A National Exotic Forest Description as at 1 April 2008*, Ministry of Agriculture and Forestry, 2009.

² Individual entries may not add to totals due to rounding.

³ The method used to estimate new planting is described on page 6 of *A National Exotic Forest Description as at 1 April 2008*, Ministry of Agriculture and Forestry, 2009.

⁴ All volumes are reported as recovered volumes inside bark (TRVIB)

⁵ These figures contain provisional data from 2009 NEFD survey and estimates based on 2008 NEFD survey.

⁶ Source: *Annual log and roundwood removal statistics*, Ministry of Agriculture and Forestry, 2009.

This is an indirect estimate that uses conversion factors for each forestry product to estimate the total roundwood input that would be required to produce total forest product outputs. It is included here as a comparison with the direct estimate of the total volume removed from the 2009 NEFD Survey.

^r Revised

^P Provisional

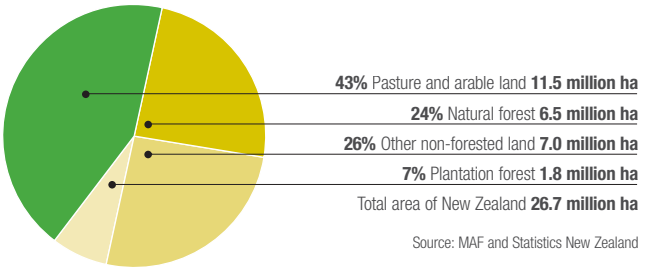
New ZEal and Economic Indicators

| | 31 March '08 | 31 March '09 |
|--|--------------|--------------|
| Population | 4,262,900 | 4,281,200 |
| GDP \$ billion | 135.5 | 134.2 |
| GDP per capita \$ | 31,944 | 31,343 |
| Exports \$ billion | 38.1 | 41.4 |
| Forest products exports total \$ billion | 3.2 | 3.7 |
| Total overseas debt \$ billion | 153.9 | 176.6 |
| Annual percentage change in GDP | 3.1% | -1.0% |
| Inflation (as measured by annual percentage change in CPI) | 3.4% | 3.0% |
| Forestry and wood processing sector contribution to GDP | 2.9% | 2.8% |

† Revised

Source: Statistics New Zealand and FOA as at 31 March 2009

New ZEal and Land Use 2009



Employment in forestry and processing activities

| Activity | Employee Count ¹ as at Mid-February | | | | | |
|--|--|---------------------------|---------------------------|---------------------------|---------------------------|---------------|
| | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| Forestry | 1,140 ^r | 1,020 ^r | 780 ^r | 710 ^r | 610 ^r | 620 |
| Logging | 4,940 ^r | 4,170 ^r | 3,890 ^r | 3,520 ^r | 3,670 ^r | 3,610 |
| Services to Forestry | 4,120 ^r | 3,430 ^r | 3,120 ^r | 2,850 ^r | 2,300 ^r | 2,350 |
| Total Forestry and Logging | 10,200^r | 8,620^r | 7,790^r | 7,080^r | 6,580^r | 6,580 |
| Log Sawmilling | 8,120 ^r | 7,600 ^r | 7,550 ^r | 7,050 ^r | 6,820 ^r | 6,160 |
| Wood Chipping | 30 | 18 | 9 | 12 | 9 | 15 |
| Timber Resawing and Dressing | 1,880 ^r | 1,920 ^r | 2,040 ^r | 1,980 ^r | 2,210 ^r | 2,070 |
| Plywood & Veneer Manufacturing | 1,900 ^r | 2,000 ^r | 2,030 ^r | 1,710 ^r | 1,770 ^r | 1,570 |
| Fabricated Wood Manufacture | 1,380 ^r | 1,370 ^r | 1,280 ^r | 1,180 ^r | 1,130 ^r | 980 |
| Pulp, Paper & Paperboard Manufacturing | 2,930 ^r | 2,720 ^r | 2,690 | 2,350 ^r | 2,090 | 2,040 |
| Total Forestry and First Stage Processing | 26,440^r | 24,248^r | 23,389^r | 21,362^r | 20,609^r | 19,415 |

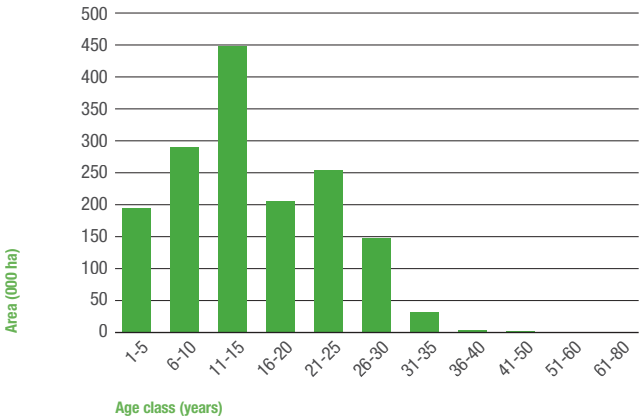
Source: Statistics New Zealand

¹ **Employee count** is a head-count of all salary and wage earners for the February reference month. Previous releases in this series described "Persons engaged" (total number of full-time employees and working proprietors (ie number of persons working 30 hours or more per week plus half the number of persons working part-time)), and so the data is not strictly comparable with previous releases in this series.

^r Revised

Net stocked area of Radiata Pine

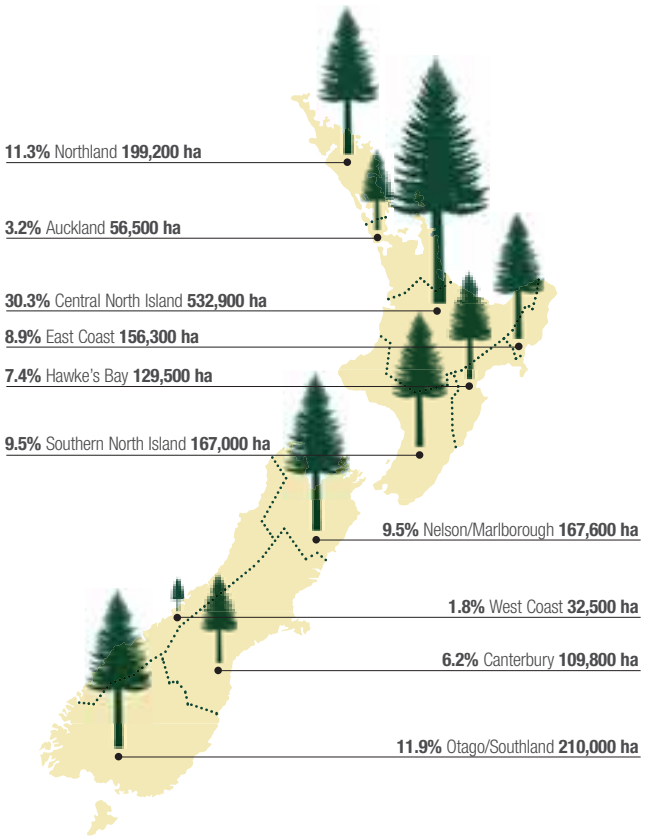
(By age class at 1 April 2008)



Source: NEFD 2008

Where the Plantation Forests are

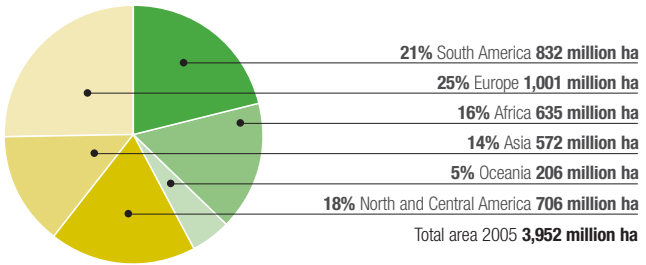
(Hectares)



Total 1,761,000 hectares

Source: NEFD 2008

Global forest areas by main regions (2005)



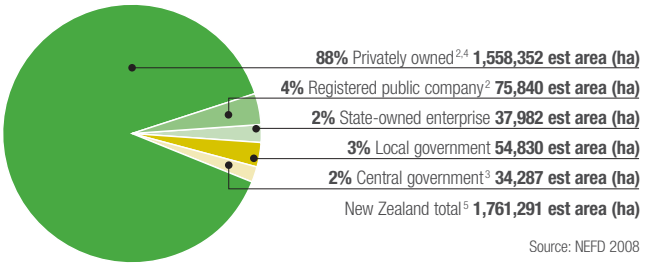
Did you know that New Zealand's forest industry supplies 1.1% of world and 8.8% of Asia Pacific's forest products trade? All from just 0.05% of the world's forest resource and an annual harvest area equivalent to 0.0009% of global forest cover. The reason:

highly
productive,
sustainably
managed
plantation
forests.



Plantation forest ownership¹

(Net stocked planted production forest area as at 1 April 2008 by ownership category)



Note:

¹ Ownership is based solely on the ownership of the forest irrespective of the ownership of the land.

² "Privately owned" includes all privately owned forests. The legal entities included in this category are private companies, partnerships, individuals and trusts, which include Maori trusts and incorporations.

³ "Central Government" forests are predominantly Crown owned forests on Maori leasehold land.

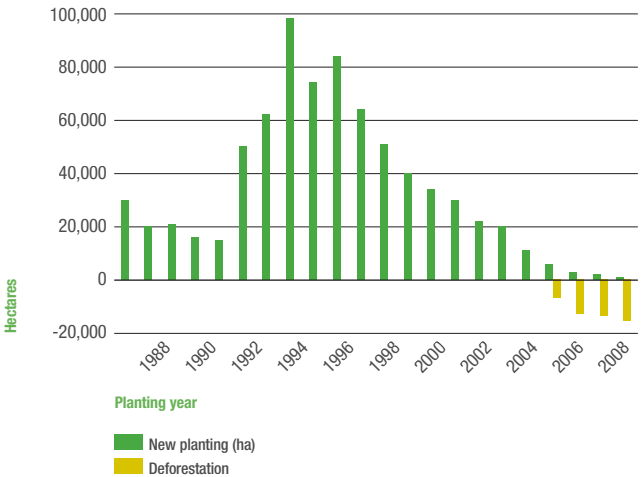
These forests are managed by the Ministry of Agriculture and Forestry.

⁴ Note that significant changes in forest ownership occurred during 2003 resulting in large areas of forest previously owned by public companies now being privately owned.

⁵ Individual entries may not sum to totals shown due to rounding.



New forest planting and deforestation since 1997



Source: NEFD 2008

Note:

¹ These estimates do not include immature forest cleared for other land uses.

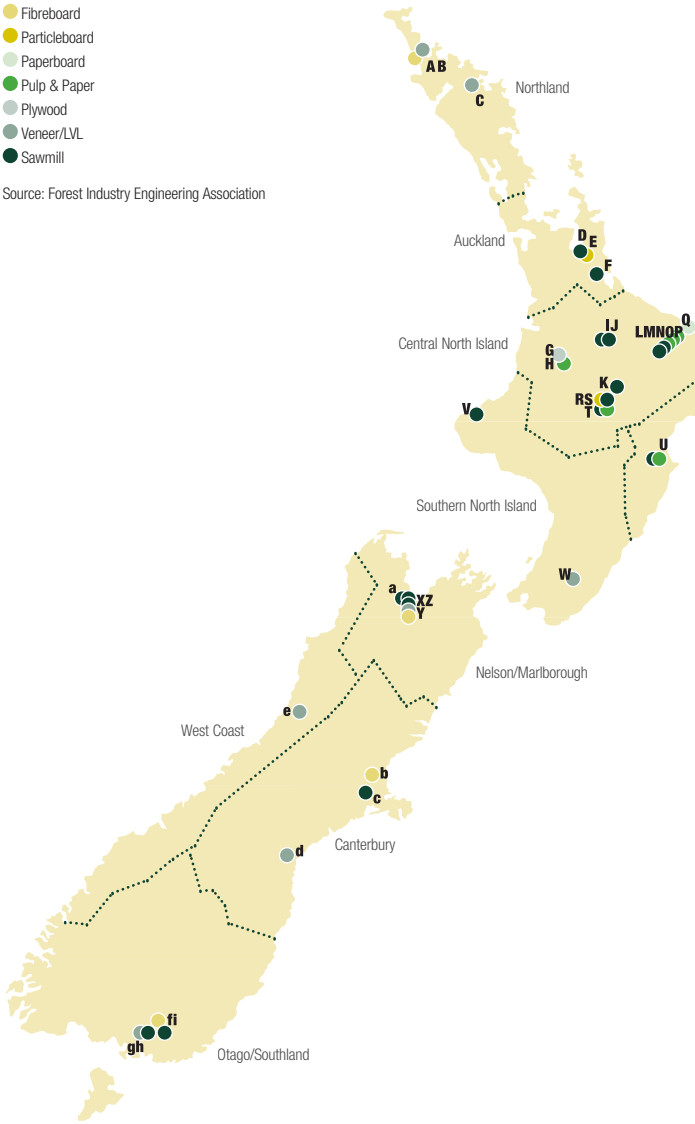
Deforestation is a relatively new phenomenon and sensitivity over deforestation and the increased separation between forest and land ownership has made it difficult to collect this information in a postal survey.

Official statistics of the area of forest not intended to be replanted after harvest are unavailable before 2005.

Location of major wood processors by wood supply region

- Fibreboard
- Particleboard
- Paperboard
- Pulp & Paper
- Plywood
- Veneer/LVL
- Sawmill

Source: Forest Industry Engineering Association





Northland:

- **A** Juken New Zealand Ltd Triboard Mill (Kaitaia)
- **B** Juken New Zealand Ltd Northland Mill (Kaitaia)
- **C** Carter Holt Harvey Woodproducts, LVL (Marsden Point)

Auckland:

- **D** Thames Timber Ltd (Thames) **50,000-99,999 m³**
- **E** Carter Holt Harvey Woodproducts, Kopine (Kopu)

Central North Island:

- **F** Claymark Sawmills Ltd (Katikati) **50,000-99,999 m³ sawn**
- **G** Carter Holt Harvey Woodproducts, Plywood (Tokoroa)
- **H** Carter Holt Harvey Kinleith (Tokoroa)
- **I** Claymark Rotorua Sawmill Ltd (Rotorua) **50,000-99,999 m³**
- **J** Tachikawa Forest Products (NZ) Ltd (Rotorua) **> 100,000 m³**
- **K** Red Stag Timber (Waipa) **> 100,000 m³**
- **L** Carter Holt Harvey Woodproducts, Kawerau Sawmill (Kawerau) **> 100,000 m³**
- **M** Sequel Lumber (Kawerau) **50,000-99,999 m³**
- **N** SCA Hygiene Australasia (Kawerau)
- **O** Carter Holt Harvey Tasman Ltd (Kawerau)
- **P** Norske Skog Tasman Ltd (Kawerau)
- **Q** Carter Holt Harvey Pulp & Paper (Whakatane)
- **R** Laminex Group (Taupo)
- **S** Tenon Ltd (Taupo) **> 100,000 m³**
- **T** Winstone Pulp International (Ohakune) **50,000-99,999 m³**

Hawkes Bay:

- **U** Pan Pac Forest Products Ltd (Napier) **> 100,000 m³**

Southern North Island:

- **V** Taranakipine Ltd (New Plymouth) **50,000-99,999 m³**
- **W** Juken New Zealand (Masterton)

Nelson/Marlborough:

- **X** Waimea Sawmillers Ltd (Nelson) **50,000-99,999 m³**
- **Y** Nelson Pine Industries Ltd (Richmond)
- **Z** Southpine (Nelson) Ltd (Nelson) **50,000-99,999 m³**
- **a** Carter Holt Harvey Woodproducts, Nelson Sawmill (Eves Valley) **> 100,000 m³**

Canterbury:

- **b** Daiken (Rangiora)
- **c** SRS New Zealand Ltd (Rolleston) **50,000-99,999 m³**
- **d** Starwood Products Ltd (Timaru)

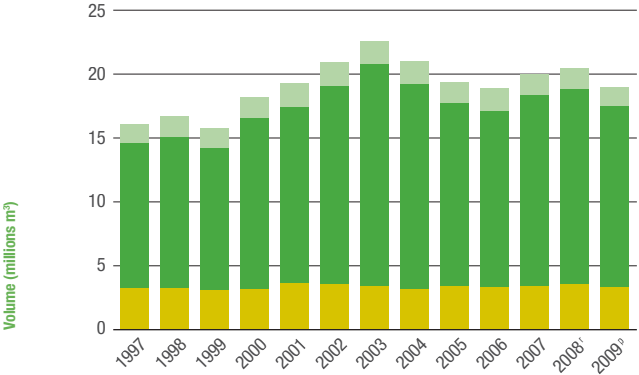
West Coast:

- **e** International Panel and Lumber Ltd (Greymouth)

Otago/Southland:

- **f** Dongwha Patinna NZ Ltd (Mataura)
- **g** Southland Veneers (Invercargill)
- **h** Niagara Sawmilling Co.Ltd (Invercargill) **50,000-99,999 m³**
- **i** Craigpine Timber Ltd (Winton) **> 100,000 m³**

Plantation Forest Harvest



Year ended March

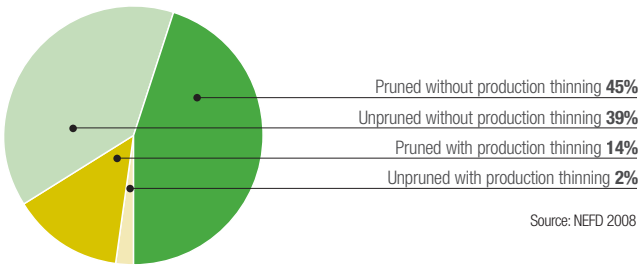
- Pulp logs
- Quality logs*
- Other roundwood*

*Other roundwood (small logs & export chips)
 *Quality logs (saw logs, peeler logs, export logs)
^r Revised
^p Provisional
 Source: MAF

Forest Management Trends – Radiata Pine

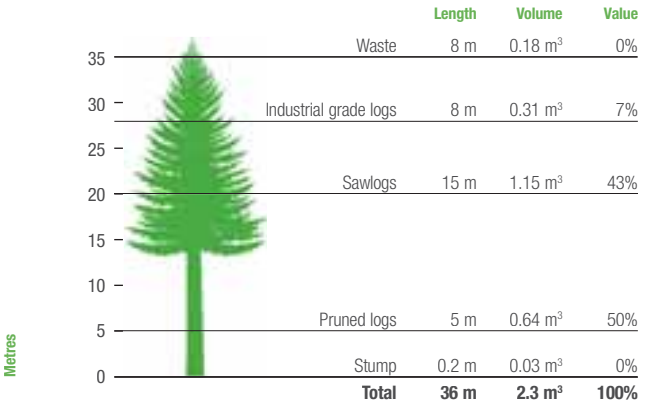
| | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
|--------------------------------------|------|------|------|------|------|------|
| Pruned without production thinning | 50% | 49% | 49% | 48% | 47% | 45% |
| Unpruned without production thinning | 29% | 33% | 34% | 36% | 37% | 39% |
| Pruned with production thinning | 17% | 16% | 14% | 14% | 14% | 14% |
| Unpruned with production thinning | 4% | 2% | 3% | 2% | 2% | 2% |

Forest Management Trends – Radiata Pine (2008)



Source: NEFD 2008

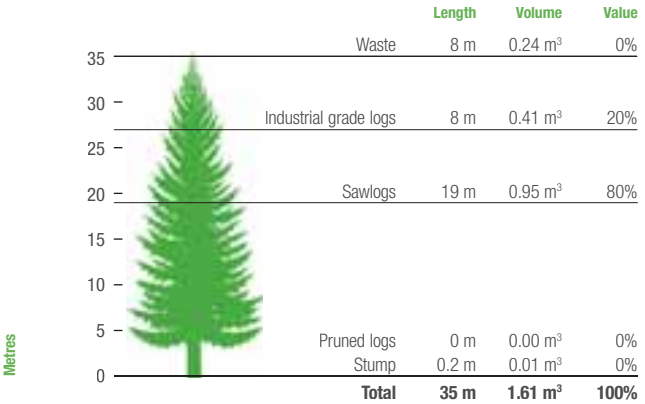
Typical Log Out-turn



Direct Sawlog Regime

Pruned and thinned to waste. Final Crop Stocking 228 spha.

Source: SCION



Structural Regime

No pruning. Thinned to waste. Final Crop Stocking 487 spha.

Source: SCION

Average site (Site Index 29 m, 300Index 23 m³/ha/yr). Clearfelled at 28 yrs.

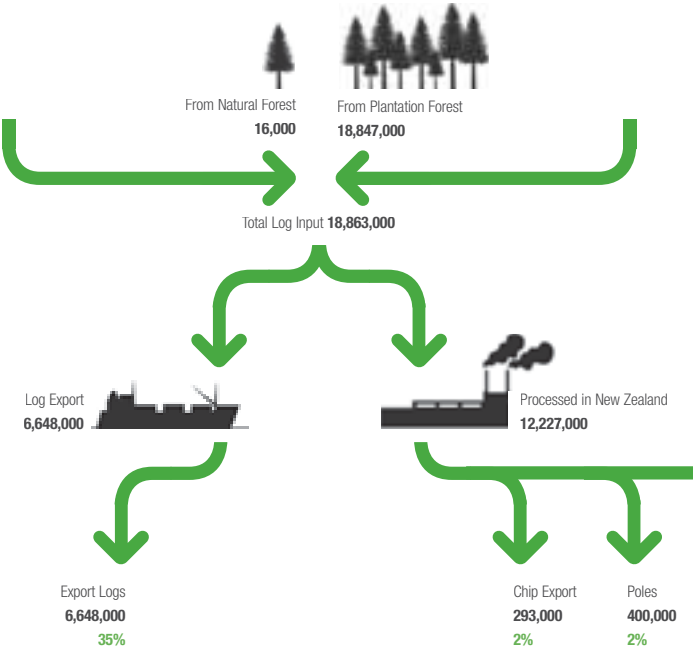
Approximately 45% of the pine estate is managed under a regime with pruning and thinning to waste.

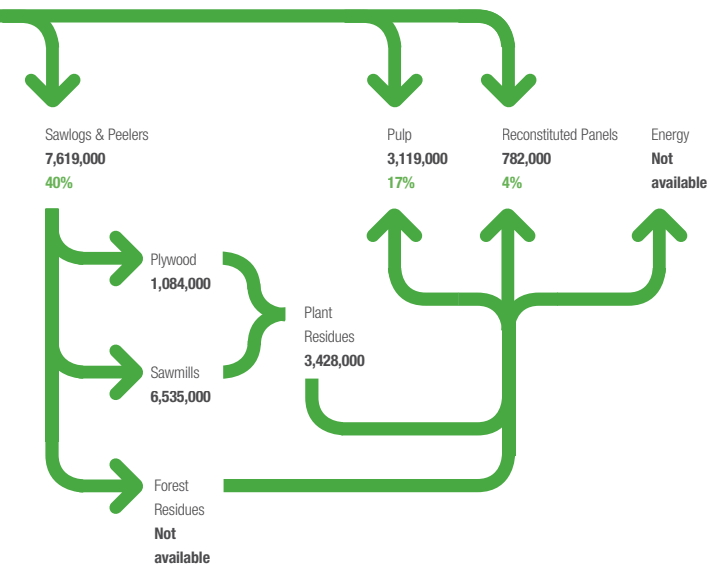
Approximately 39% of the pine estate is managed under a regime with no pruning and thinning to waste.

Log Flow in the New Zealand Forestry Industry

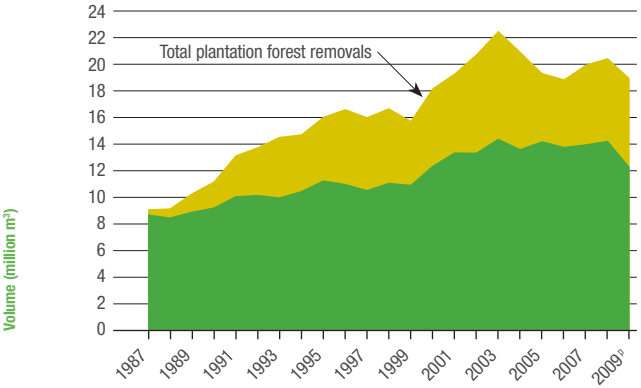
(Volumes in m³ roundwood equivalent. Year ended 31 March 2009)

Source: MAF





Where the log harvest goes



Year ended 31 March

- Exported in log form
- Processed in New Zealand

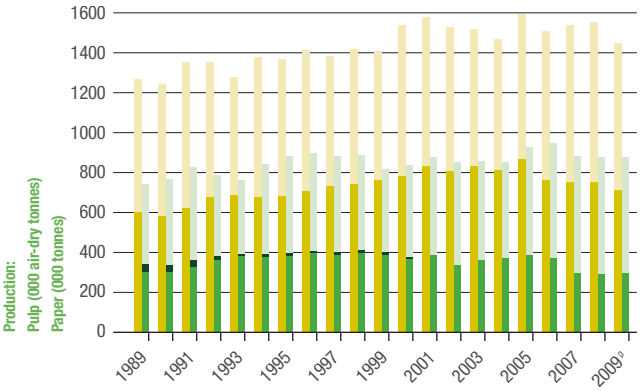
Note: Export logs data in 2007, further processed and production forest removals data from 2003 to 2007 have been revised.

^p Provisional

Source: MAF



Wood pulp, paper and paperboard production



Year ended 31 March

- Mechanical pulp
- Chemical pulp
- Newsprint
- Other printing and writing paper
- Other paper and paperboard*

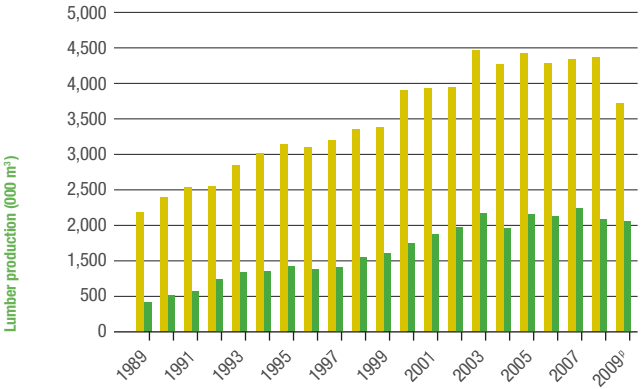
* All other paper and paperboard includes household and sanitary papers, packaging paper and paperboard.
 NB. Other printing and writing paper no longer produced in New Zealand.

^r Revised

^p Provisional

Source: MAF

Lumber production and exports



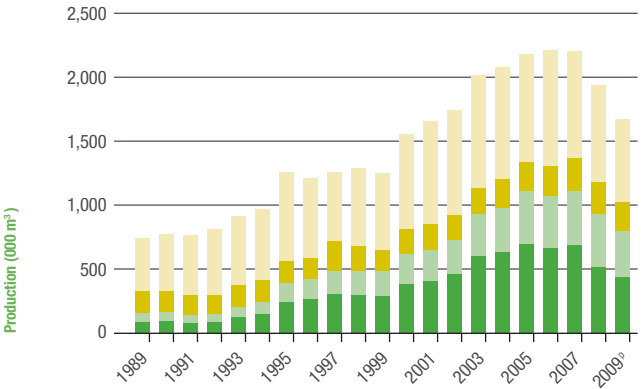
Year ended 31 March

- Indigenous and plantation grown forest lumber
- Lumber Exports

^p Provisional

Source: MAF

panel products production



Year ended 31 March

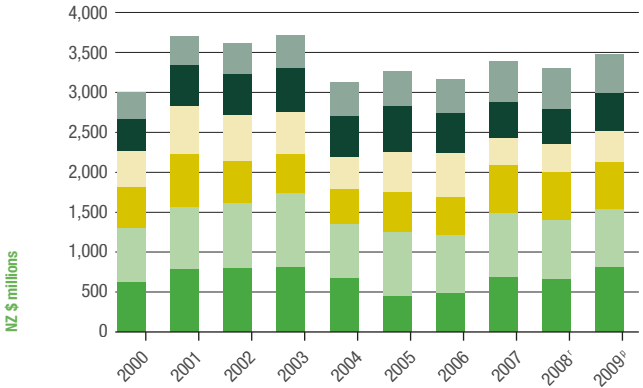
- Veneer
- Plywood
- Particleboard
- Fibreboard

Note: Plywood includes laminated veneer lumber.
Fibreboard includes MDF, hardboard and softboard.

^p Provisional

Source: MAF

Maj or export earners



Year ended 31 March

- Logs and chips
- Lumber
- Wood pulp
- Paper and paperboard
- Panel
- Other products

Note: Excludes Re-exports

^r Revised

^p Provisional

Source: Statistics New Zealand



Top export destinations

Exports of Forestry Products by Main Countries of Destination for the year ended March 2009 (provisional);

| United Arab Emirates | | India | | Thailand | | Vietnam | |
|-----------------------------|-------|--------------------|-------|--------------------|-------|--------------------|-------|
| \$NZ60,444 | | \$NZ93,155 | | \$NZ50,781 | | \$NZ73,438 | |
| Logs & Poles | 15.7% | Logs & Poles | 59.2% | Logs & Poles | 0.8% | Logs & Poles | 3.2% |
| Sawn timber | 38.7% | Sawn timber | 2.2% | Sawn timber | 42.3% | Sawn timber | 66.6% |
| Wood pulp | – | Wood pulp | 1.0% | Wood pulp | 22.5% | Wood pulp | 3.5% |
| Paper & Paperboard | 2.3% | Paper & Paperboard | 21.4% | Paper & Paperboard | 6.5% | Paper & Paperboard | 1.6% |
| Panel products | 6.1% | Panel products | 5.1% | Panel products | 3.2% | Panel products | 15.9% |
| All other | 37.2% | All other | 11.2% | All other | 24.7% | All other | 9.2% |



| Saudi Arabia | | China, People's Republic of | | Malaysia | | Indonesia | |
|---------------------|-------|------------------------------------|-------|--------------------|-------|--------------------|-------|
| \$NZ54,622 | | \$NZ619,858 | | \$NZ47,866 | | \$NZ135,773 | |
| Logs & Poles | – | Logs & Poles | 48.5% | Logs & Poles | 8.0% | Logs & Poles | 1.2% |
| Sawn timber | 51.7% | Logs & Poles | 15.6% | Sawn timber | 12.6% | Sawn timber | 17.4% |
| Wood pulp | – | Sawn timber | 23.2% | Wood pulp | 33.8% | Wood pulp | 55.0% |
| Paper & Paperboard | 1.9% | Wood pulp | 5.5% | Paper & Paperboard | 36.5% | Paper & Paperboard | 3.9% |
| Panel products | 26.9% | Paper & Paperboard | 5.2% | Panel products | 8.5% | Panel products | 11.1% |
| All other | 19.6% | Panel products | 2.0% | All other | 0.6% | All other | 11.4% |

Note:
All other forestry products include chips, mouldings, manufactures of paper and paperboard, furniture and miscellaneous forest products.
Other countries are all other countries to which New Zealand has exported forestry products during the year.

Source: Statistics New Zealand and FOA

Values are \$NZ f.o.b.

| Korea, Republic of | | Japan | | USA | | Other Countries | |
|---------------------------|-------|--------------------|-------|--------------------|-------|------------------------|-------|
| \$NZ385,737 | | \$NZ515,889 | | \$NZ255,479 | | \$NZ252,656 | |
| Logs & Poles | 69.4% | Logs & Poles | 17.2% | Logs & Poles | — | Logs & Poles | 0.6% |
| Sawn timber | 3.9% | Sawn timber | 8.5% | Sawn timber | 59.6% | Sawn timber | 29.4% |
| Wood pulp | 16.8% | Wood pulp | 18.8% | Wood pulp | 0.8% | Wood pulp | 9.1% |
| Paper & Paperboard | 4.2% | Paper & Paperboard | 0.0% | Paper & Paperboard | 4.5% | Paper & Paperboard | 29.4% |
| Panel products | 5.1% | Panel products | 40.3% | Panel products | 9.4% | Panel products | 6.9% |
| All other | 0.6% | All other | 15.3% | All other | 25.8% | All other | 24.5% |



| Australia | | Philippines | | Taiwan | | Hong Kong (SAR) | |
|--------------------|-------|--------------------|-------|--------------------|-------|------------------------|-------|
| \$NZ963,510 | | \$NZ96,904 | | \$NZ74,928 | | \$NZ33,317 | |
| Logs & Poles | 0.0% | Logs & Poles | — | Logs & Poles | 10.3% | Logs & Poles | 0.1% |
| Sawn timber | 16.5% | Sawn timber | 13.2% | Sawn timber | 36.0% | Sawn timber | 4.4% |
| Wood pulp | 12.3% | Wood pulp | 6.2% | Wood pulp | 36.1% | Wood pulp | 3.3% |
| Paper & Paperboard | 34.7% | Paper & Paperboard | 44.6% | Paper & Paperboard | 11.3% | Paper & Paperboard | 84.3% |
| Panel products | 9.2% | Panel products | 28.8% | Panel products | 6.0% | Panel products | 2.8% |
| All other | 27.3% | All other | 7.1% | All other | 0.3% | All other | 5.1% |

ry products.

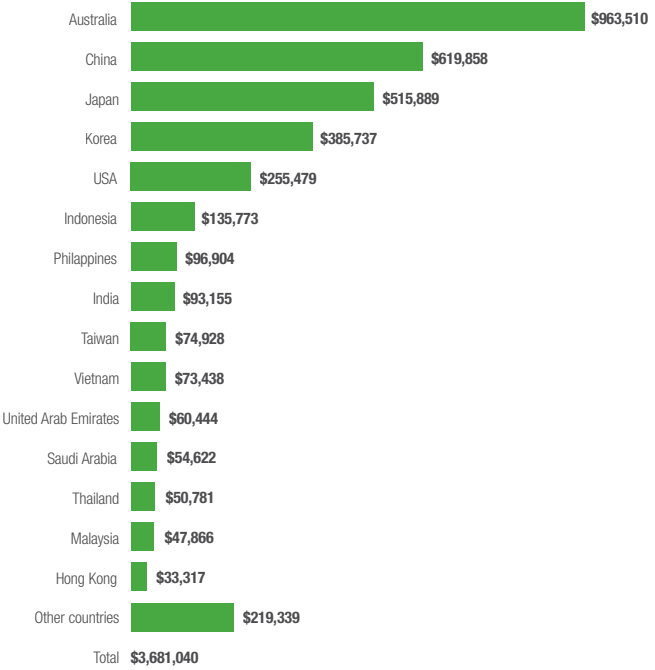
Top export destinations

Includes Newsprint export figures

Exports of Forestry Products by Main Countries of Destination for the year ended March 2009 (provisional)

\$NZ f.o.b. 000

Top export destinations

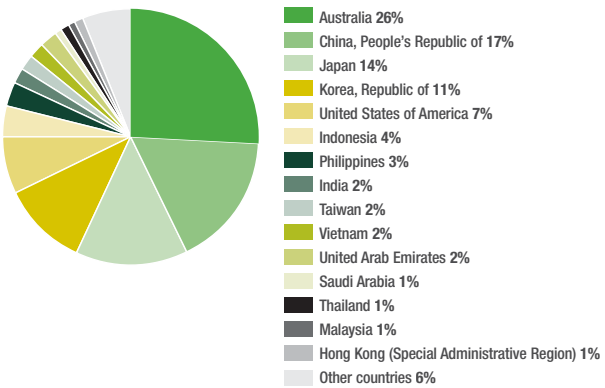


Source: Statistics New Zealand and FOA



Exports of Forestry Products from New Zealand

For year ended 31 March 2009 (provisional)



Source: Statistics New Zealand and FOA

Production and exports of selected forestry products

Year ended 31 March 2009 ^(P)

| Forestry Product | 2006 | | | | Total Production | Quantity Ex-ported ² |
|---|------------------|---------------------------------|------------|-----------------------------|------------------|---------------------------------|
| | Total Production | Quantity Ex-ported ² | % Exported | Export Value (\$NZm f.o.b.) | | |
| Logs (000 m ³) | 18,827 | 5,073 | 26.95% | 447 | 19,915 | 5,973 |
| Wood Chips(BDU m ³) | .. | 262,403 | .. | 39 | .. | 267,836 |
| Sawn Timber (000 m ³) | 4,235 | 1,821 | 43.00% | 720 | 4,301 | 1,938 |
| Chemical Pulp (tonnes) | 742,800 | 484,945 | 65.29% | 323 | 784,995 | 612,641 |
| Mechanical Pulp (tonnes) | 818,373 | 369,124 | 45.10% | 155 | 743,996 | 197,789 |
| Newsprint ³ (tonnes) | 367,064 | 300,010 | 81.73% | 251 | 292,015 | 139,020 |
| Other Paper and Paperboard (tonnes) | 573,396 | 381,640 | 66.56% | 293 | 579,931 | 378,530 |
| Fibreboard (m ³) | 906,938 | 708,152 | 78.08% | 240 | 836,755 | 657,072 |
| Plywood ¹ (m ³) | 403,808 | 106,076 | 26.27% | 135 | 421,794 | 72,463 |
| Veneer (m ³) | 665,206 | 138,487 | 20.82% | 73 | 688,312 | 154,740 |
| Particleboard (m ³) | 238,205 | 107,728 | 45.22% | 59 | 256,239 | 110,197 |
| Cont Shaped Wood | .. | .. | .. | 114 | .. | .. |
| Manufactures | .. | .. | .. | 167 | .. | .. |
| Wooden Furniture | .. | .. | .. | 53 | .. | .. |
| Miscellaneous and other wood products | | | | 93 | | |
| All Forestry Products | .. | .. | .. | 3,164 | .. | .. |
| Total New Zealand Exports | .. | .. | .. | 29,700 | .. | .. |
| Forest Exports as a % of Total Exports | .. | .. | .. | 10.65% | .. | .. |

Source: MAF, Statistics New Zealand and FOA

Note:

¹ Plywood includes laminated veneer lumber.

² Exports excluded re-exports.

³ Newsprint figures 2007 and 2008 year ended December, 2009 year ended June.

^P Provisional

.. Not available

| 2007 | | 2008 | | | | 2009 | | | |
|------------|-----------------------------|------------------|---------------------------------|------------|-----------------------------|------------------|---------------------------------|------------|-----------------------------|
| % Exported | Export Value (\$NZm f.o.b.) | Total Production | Quantity Ex-ported ² | % Exported | Export Value (\$NZm f.o.b.) | Total Production | Quantity Ex-ported ² | % Exported | Export Value (\$NZm f.o.b.) |
| 29.99% | 634 | 20,406 | 6,199 | 30.38% | 598 | 18,887 | 6,655 | 35.24% | 739 |
| .. | 47 | .. | 366,832 | .. | 62 | .. | 296,038 | .. | 70 |
| 45.06% | 805 | 4,341 | 1,771 | 40.80% | 727 | 3,593 | 1,739 | 48.40% | 726 |
| 78.04% | 516 | 801,179 | 623,128 | 77.78% | 514 | 735,264 | 583,383 | 79.34% | 490 |
| 26.58% | 79 | 745,288 | 243,102 | 32.62% | 97 | 704,876 | 233,162 | 33.08% | 96 |
| 47.61% | 151 | 258,654 | 188,053 | 72.70% | 202 | 291,279 | 181,865 | 62.44% | 202 |
| 65.27% | 342 | 585,429 | 374,770 | 64.02% | 350 | 575,914 | 372,937 | 64.76% | 387 |
| 78.53% | 243 | 765,044 | 579,222 | 75.71% | 229 | 644,654 | 502,323 | 77.92% | 246 |
| 17.18% | 109 | 416,383 | 77,680 | 18.66% | 112 | 362,102 | 82,183 | 22.70% | 113 |
| 22.48% | 48 | 512,575 | 134,820 | 26.30% | 43 | 430,685 | 146,337 | 33.98% | 50 |
| 43.01% | 51 | 245,309 | 118,341 | 48.24% | 53 | 230,462 | 133,483 | 57.92% | 68 |
| .. | 123 | .. | .. | .. | 119 | .. | .. | .. | 96 |
| .. | 188 | .. | .. | .. | 211 | .. | .. | .. | 225 |
| .. | 55 | .. | .. | .. | 52 | .. | .. | .. | 42 |
| .. | 150 | .. | .. | .. | 126 | .. | .. | .. | 131 |
| .. | 3,540 | .. | .. | .. | 3,494 | .. | .. | .. | 3,681 |
| .. | 33,479 | .. | .. | .. | 36,645 | .. | .. | .. | 41,399 |
| .. | 10.57% | .. | .. | .. | 9.53% | .. | .. | .. | 8.89% |

Value of exports by product and destination

Year ended 31 March 2009 ^(*)

| Country of Destination | Logs & Poles Value (\$NZ000) | Lumber Value (\$NZ000) |
|---|------------------------------|------------------------|
| Australia | 64 | 158,988 |
| China, People's Republic of | 300,521 | 96,969 |
| Japan | 88,529 | 43,635 |
| Korea, Republic of | 267,503 | 15,145 |
| United States of America | – | 152,245 |
| Indonesia | 1,606 | 23,616 |
| Philippines | – | 12,809 |
| India | 55,135 | 2,013 |
| Taiwan | 7,719 | 26,976 |
| Vietnam | 2,362 | 48,879 |
| United Arab Emirates | 9,507 | 23,390 |
| Saudi Arabia | – | 28,238 |
| Thailand | 414 | 21,472 |
| Malaysia | 3,825 | 6,042 |
| Hong Kong (Special Administrative Region) | 18 | 1,465 |
| Fiji | – | 1,080 |
| Other countries | 1,314 | 63,463 |
| Total | 738,517 | 726,425 |

Source: Statistics New Zealand and FOA

Note:

Values are \$NZ f.o.b. and may include items, e.g. some plywood items, for which no quantities are given. Paper and paperboard includes Newsprint exports for year ended Jun 09, all other products are for the year ended Mar 09.

All other forestry products include chips, mouldings, manufactures of paper and paperboard, furniture and miscellaneous forestry products.

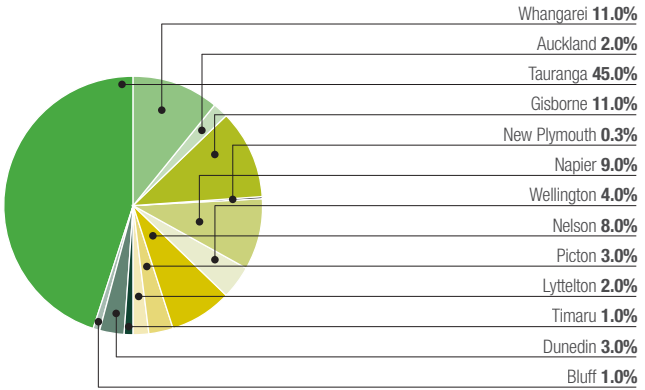
Other countries are all other countries to which New Zealand has exported forestry products during the year.

^{*} Provisional

| Wood Pulp Value (\$NZ000) | Paper & Paperboard Value (\$NZ000) | Panel Products Value (\$NZ000) | All Other Forestry Products Value (\$NZ000) | All Forestry Products Value (\$NZ000) | % of Total |
|---------------------------|------------------------------------|--------------------------------|---|---------------------------------------|-------------|
| 118,760 | 334,032 | 88,287 | 263,379 | 963,510 | 26% |
| 143,682 | 33,940 | 32,396 | 12,350 | 619,858 | 17% |
| 96,910 | 3 | 208,007 | 78,805 | 515,889 | 14% |
| 64,975 | 16,108 | 19,801 | 2,205 | 385,737 | 11% |
| 1,970 | 11,488 | 23,958 | 65,818 | 255,479 | 7% |
| 74,686 | 5,249 | 14,979 | 15,518 | 135,654 | 4% |
| 6,018 | 43,239 | 27,940 | 6,898 | 96,904 | 3% |
| 912 | 19,938 | 4,701 | 10,456 | 93,155 | 2% |
| 27,043 | 8,427 | 4,519 | 244 | 74,928 | 2% |
| 2,540 | 1,181 | 11,702 | 6,774 | 73,438 | 2% |
| – | 1,413 | 3,659 | 22,475 | 60,444 | 2% |
| – | 1,037 | 14,664 | 10,683 | 54,622 | 1% |
| 11,410 | 3,282 | 1,645 | 12,558 | 50,781 | 1% |
| 16,156 | 17,463 | 4,074 | 306 | 47,866 | 1% |
| 1,094 | 28,095 | 938 | 1,707 | 33,317 | 1% |
| 3 | 12,982 | 1,644 | 11,456 | 27,165 | 1% |
| 19,905 | 51,561 | 13,686 | 42,364 | 192,293 | 5% |
| 586,064 | 589,438 | 476,600 | 563,996 | 3,681,040 | 100% |

Log exports by port

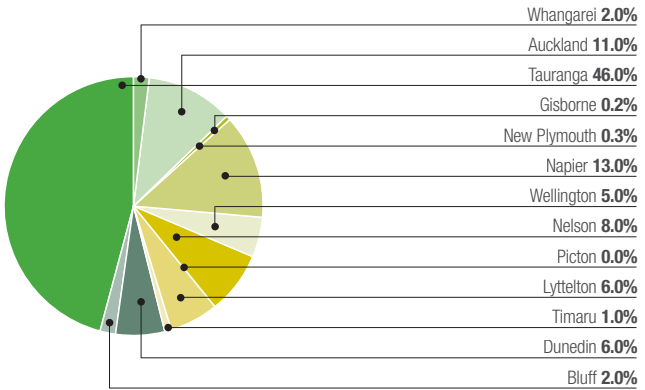
Year ended 31 March 2009



Source: Statistics New Zealand

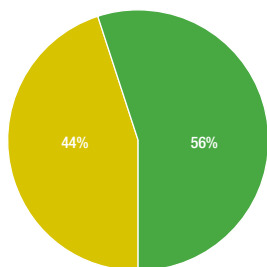
Sawn Timber Exports by Port

Year ended 31 March 2009



Source: Statistics New Zealand

Proportion of New Zealand's 1.75 million ha plantation certified by FSC



■ Non Certified
■ Certified

| | Productive Area (ha) |
|---|-----------------------------|
| Hancock Forest Management | 222,154 |
| Timberlands Ltd | 183,069 |
| Ernslaw One Ltd (North Island) | 72,059 |
| PF Olsen Ltd | 63,145 |
| Juken New Zealand Ltd | 60,451 |
| Rayonier NZ | 38,051 |
| PanPac Forest Products Ltd | 34,271 |
| NZ Forest Managers Ltd | 34,052 |
| Crown Forestry, MAF (West Coast) | 30,006 |
| PF Olsen Ltd | 29,761 |
| Hikurangi Forest Farms Ltd | 28,636 |
| Wenita Forest Products Ltd | 25,101 |
| Blakely Pacific | 23,287 |
| Ernslaw One Ltd (South Island) | 22,127 |
| City Forests Ltd | 16,044 |
| Southland Plantation Forest Company of NZ | 10,544 |
| Total | 892,758 |
| Other | 94,493 |
| Total Plantation FSC | 987,251 |

Note: Productive Area = Net Stocked Area + Area Awaiting Restocking.

Figures as at 30 June 2009

Source: FSC/NZ FSC Certified Forest Owner/Manager Cluster Group

54 %

FOA members contributed 10,690,076 m³ of FSC Certified product to the total NZ harvest production of 19,693,000 m³ which equates to 54% of total production.

Source: FOA 2009

Forest industries training statistics

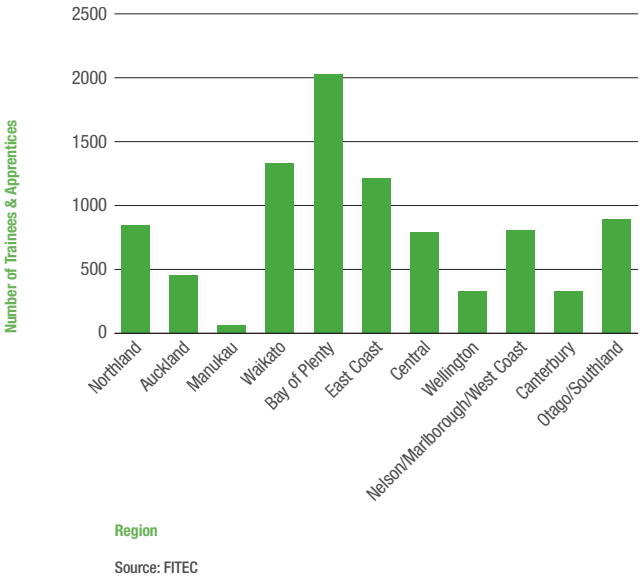
Trainees and Apprentices by sector

as at December 2009



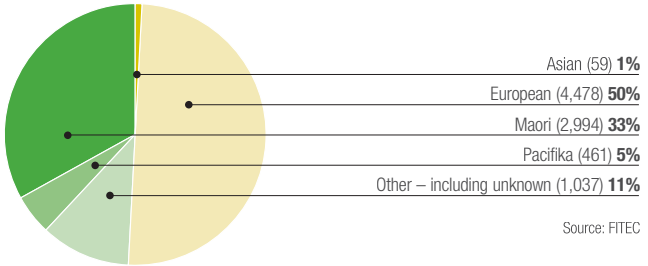
Trainees and apprentices by region

as at December 2009



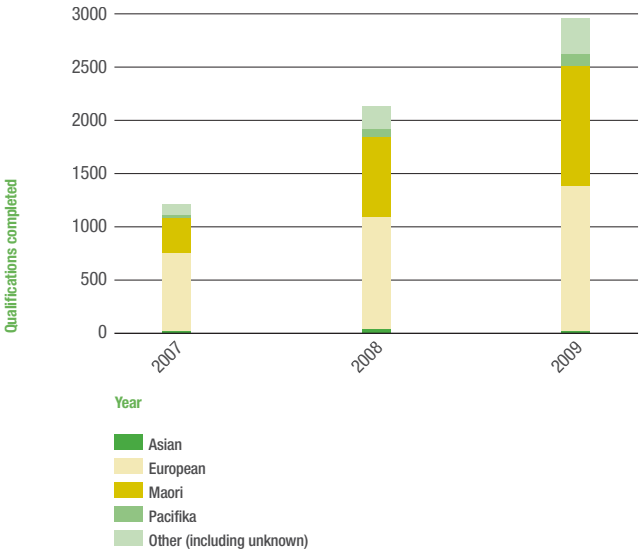
Trainees and apprentices by Ethnicity

as at December 2009



Qualifications completed by ethnicity

as at December 2009



Source: FITEC



Members of the New Zealand Forest Owners Association are committed to the following agreements:

New Zealand Forest Accord 1991

The New Zealand Forest Accord 1991 was updated in 2007 to reaffirm the principles of the 1991 Accord and respond to the threat of climate change. It is an agreement between conservation groups and most major plantation growers and users to:

- Define areas unsuitable for forestry
- Acknowledge that existing natural forest should be maintained
- Recognise commercial forests as essential
- Ensure any use of wood from indigenous forests is on a sustainable, value-added basis
- Ensure new plantation forests will not disturb areas of natural indigenous vegetation

www.nzfoa.org.nz

New Zealand Climate Change Accord 2007

Acknowledging, inter alia:

- The environmental benefits delivered by indigenous and plantation forests
- That carbon sequestration by forests is a key mechanism to offset greenhouse gas emissions
- That policies must be consistent with the Polluter Pays Principle, be broad-based and cover all greenhouse gases in all sectors, should avoid net increases in greenhouse gases, should promote the retention and expansion of indigenous forests and the replanting and expansion of plantation forests; ensure all sectors are taking responsibility, be consistent with customary rights and the Treaty of Waitangi and acknowledge that wood is a renewable reusable and recyclable resource.

www.nzfoa.org.nz

Eliminating Illegal Forest Products

On 14 August 2008 a statement was signed in which the signatories called on the New Zealand Government, importers, processors, retailers, New Zealand forest and plantation managers and processors of forest and plantation products to support their call to strongly oppose the import and the use of illegally harvested and traded forest products in New Zealand. Trading in illegal products contributes to deforestation, biodiversity loss, poverty and other adverse social effects, and undermines the viability of legal forest products.

Prohibition of the import of these products will benefit New Zealand's legal forest products industries; assist in improving the producer countries' social, environmental, and economic well being; and show that New Zealand is responsibly addressing the problem. Illegal logging is not sustainable and thus eliminating illegal logging is an important step towards achieving sustainable forestry globally.

The organisations that signed the statement were: the Ecologic Foundation, Environment & Conservation Organisations of New Zealand (ECO), Greenpeace Aotearoa New Zealand, NZ Forest Owners Association, NZ Farm Forestry Association, NZ Pine Manufacturers Association, Royal Forest and Bird Protection Society, Sustainable Energy Forum, Wood Processors Association of New Zealand and WWF New Zealand.

www.nzfoa.org.nz

Log Transport Safety Accord

Log truck operators and forest owners on 7 August 2008 signed an updated Log Transport Safety Accord designed to further improve the safety of all road users. Since the accord was first signed in 2001 there has been a 65% reduction in log truck crashes, and a 75% reduction in rollover crashes, during a time of rapid growth in the logging industry. The Accord has been updated with the aim of reducing the rollover crash rate even further.

www.nzfoa.org.nz

Principles for Commercial Plantation Forest Management in New Zealand

To promote understanding between the signatory parties with a view to New Zealand achieving environmental excellence in plantation forest management and participating as an effective advocate internationally for the sustainable management of plantation forests and the protection, preservation, and sustainable management of natural forests. These principles are complementary to the New Zealand Forest Accord (August 1991).

www.nzfoa.org.nz

NZ WOOD: Forests and wood fight climate change

Wood is the world's most renewable raw material. For this reason forests and the wood they provide are vital in the fight against climate change. As the effects of global warming impact on our environment, the use of renewable and sustainable building materials has never been so important.

The stages of the wood story – planting and renewal, growth, harvesting and use are part of a renewable cycle that takes and stores carbon dioxide from the atmosphere, making wood a better-than carbon-neutral building material.

Wood is the only construction material which has absorbed CO₂ from the atmosphere when produced, not emitted more

During its production, one tonne of:

- concrete – has released 159 kilos of CO₂ into the atmosphere
- steel – has released 1.24 tonnes of CO₂ into the atmosphere
- aluminium – has released 9.3 tonnes of CO₂ into the atmosphere
- wood, however, has absorbed a net 1.7 tonnes of CO₂ from the atmosphere, over and above the energy expended in growing, harvesting and processing.

The more timber you use in a house, the more CO₂ you remove from the atmosphere

- It takes around 20 trees to build an average house frame
- A steel house frame has added 4.5 tonnes of CO₂ to the atmosphere
- A wooden house frame has absorbed 9.5 tonnes CO₂ from the atmosphere
- Choosing timber options for an average house can take around 20 tonnes net of CO₂ out of the atmosphere (saving equivalent of 150 trips Auckland to Wellington, or 7.1 years of car use)
- Using alternative materials (concrete, steel, brick and aluminium) can add 24 tonnes net CO₂ to the atmosphere (costing the equivalent of 180 trips Auckland to Wellington, or 8.6 years of car use)

Using wood is something we can all do to help the environment. By demanding and using more sustainably produced wood, we can ensure that more trees will be planted and more carbon dioxide will be absorbed from the atmosphere.

The result is a better world for ourselves, our families and future generations. It's simple.

Wood. Our most renewable raw material.

<http://www.nzwood.co.nz>



Major New Zealand Forestry Species

There are a range of New Zealand plantation grown exotic and indigenous species to suit a range of applications including structural, appearance, engineered wood products, furniture and joinery.

Radiata Pine

Radiata Pine has a number of structural uses including decking, fencing, exterior cladding, window sashes, pergolas, landscaping, shingles, barge boards and exterior trim. Untreated, it can be used for furniture, mouldings, trim and panelling. Panel products, such as plywood, MDF and laminated veneer lumber, are also available from radiata pine resources.

Douglas-fir

Douglas-fir can be used for roof trusses and framing, internal panelling, and glue laminated beams. As well as being popular for light timber framing, the larger dimensional stock is sought after for exposed interior posts and beams because of its good stability and freedom from twist. Glue lamination to produce beams, arches and scaffold planks is also common.

Macrocarpa

Macrocarpa has a range of uses including ceiling sarking, exposed beams, flooring, wall panelling, framing, furniture, solid wood bench tops, architraves and skirtings. It can be used outside for weatherboard, soffit, fascia, pergolas, decking and outdoor furniture. It is not recommended in-ground for construction purposes (including in-ground posts for fencing, decking and pergolas).

Eucalypts

Eucalypts have a number of applications. The Blue Gum group is suitable for tongue and groove flooring, in-sequence parquet, overlay, joinery stairs, doors, furniture, paneling, decking, outdoor furniture, and sliced veneer. The Stringybark group is suitable for flooring, joinery, decking, cross arms (mainly *E. microcorys*), and sliced veneer. The Ash group is suitable for furniture, joinery, and sliced veneer.

Source: <http://www.nzwood.co.nz/species/>

New Zealand Forest Owners' Association strategic plan

Vision

New Zealand planted forests are a major part of the New Zealand economy, providing a range of sustainably managed products, and acknowledged as an integral part of the country's regional development. They are also recognised as a major component in New Zealand's contribution to meeting the effects of climate change and addressing a range of other environmental challenges.

Against this background, the NZ Forest Owners Association is the recognised and respected body of the commercial forest growing industry.

Mission

The mission statement of New Zealand Forest Owner's Association (FOA) is:

"To actively promote sustainable commercial forestry in New Zealand with a view to creating a favourable economic, political and social climate for the profitable operation of members' businesses."

Objectives

Objective 1 – Services

Provide specific services to members which protect or add value to their businesses.

Objective 2 – Promotion

Promote forestry as an important part of New Zealand's national and regional economies as well as an important contributor to environmental sustainability and climate change outcomes.

Objective 3 – Advocacy

Advocate central and local government policies and third party policies which facilitate the economic performance of plantation forestry and secure the asset.

Objective 4 – Collaboration

Encourage better outcomes for forest growing through industry collaboration to provide enhanced productivity and production and/or reduced operating costs.

FOA represents the owners of New Zealand's commercial plantation forests. The association and its members are committed to the highest standards of sustainable silviculture, environmental practice and workforce safety. Plantation forestry is science-based and highly innovative. It is New Zealand's third largest export industry and a major regional employer. It is the industry with the greatest potential to transform New Zealand into a carbon-neutral economy where all land-based industries are environmentally sustainable. Its members' forests comprise more than 75 per cent of the country's 1.75 million hectares of plantation forestry.



Terms and things

Area and Volume

- A hectare (ha) = 100 x 100 metres (about the size of two rugby fields).
- A cubic metre (m³) = 1 metre x 1 metre x 1 metre (about three times the size of a household dishwasher).
- An average radiata pine tree yields 2.4 m³ of wood at harvest.
- 1 hectare of 28 year-old radiata pine contains between 650 and 800 m³ of wood.
- 1 hectare grows up to 28 m³ of wood each year.
- NZ radiata pine plantations yield up to 30% more wood per hectare than they did 60 years ago.
- A log truck and trailer contains approximately 30 tonnes of logs.
- A log ship contains approximately 30-35,000 tonnes of logs.

Costs and Values

- It costs 18 - 24 cents to truck one m³ of wood one km (for 100 km that is \$18 - \$24 per m³).
- Harvesting costs begin around \$15 - \$24 per m³ – increasing with steeper terrain, environmental sensitivities, smaller trees etc.
- Depending on market conditions, the average radiata pine tree when harvested is worth \$50 - \$200 to the grower.
- Value of wood being grown (added) each year in one hectare of forest is between \$500 and \$1,500.
- High quality pruned stands, well located to the market can sell for as much as \$50,000 per hectare net to the owner, while unpruned stands may net less than \$10,000 – particularly if logging and cartage costs are higher.

Note: Prices are indicative only.

Carbon emissions and sequestration

The Carbon Cycle

Planting trees begins a cycle that continuously removes, releases and reabsorbs destructive greenhouse gases such as carbon dioxide. As trees grow, they absorb carbon dioxide through the process of photosynthesis.

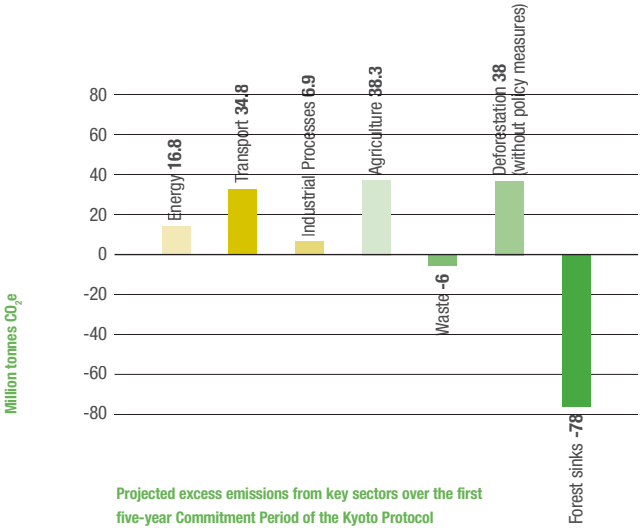
The carbon dioxide absorbed by the growing forest remains stored within the wood products used throughout the lifetime of the building structure or product.

At the end of a structure's or product's lifetime the carbon dioxide is released back into the atmosphere when the wood decays or is burnt as fuel.

Wood can be recycled to extend its lifetime and slow down the natural release of carbon dioxide back into the atmosphere. Once the carbon dioxide is released, it is available to be re-absorbed by growing trees.

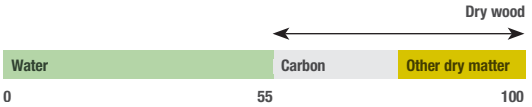
When wood materials decay or are burnt as fuel they release carbon dioxide that was absorbed during the growth of the trees and are therefore carbon neutral.

Carbon emissions by key sectors and forest Sequestration

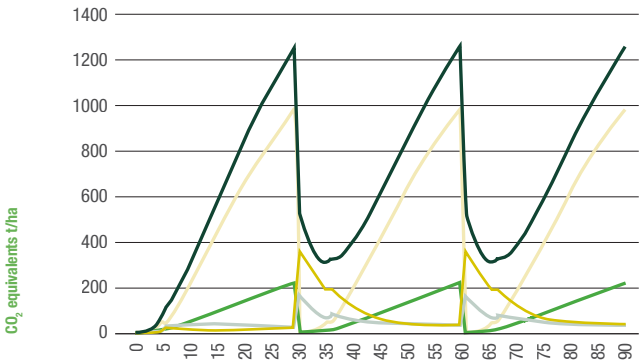


Source: NZ Ministry for the Environment/FOA

- In 2005, forests removed 25.5 m tonnes of CO₂ from the atmosphere.
- 1 hectare sequesters approximately 25 tonnes CO₂ per year.
- A fresh log contains about 55% water; approximately 50% of the balance is carbon.



Carbon Yield d: Mul tiple Rotations



Stand age (years)

- Total
- Above ground live biomass
- Below ground live biomass
- Dead woody litter
- Fine litter

Growth Modelling region: Waikato Taupo, Latitude 37.8, Altitude 495 m
300Index 29.0 m³/ha/year, Site index 34.8 m

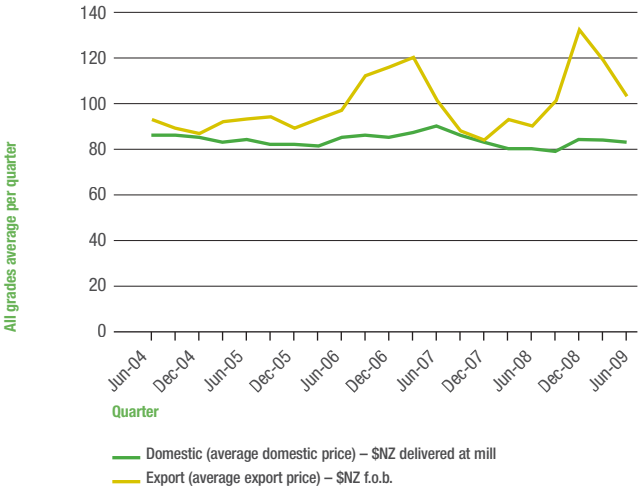
This is the classic sawtooth carbon sequestration graph for a plantation stand. It shows the sequestration and loss of carbon in the system over time. It records the gradual sequestration of carbon in the different layers (leaves, roots and litter) and the assumed release when the crop is harvested. Note the difference in release at harvesting time for the different layers, with a level of carbon being retained as sequestered, despite the crop being harvested.

The graph is for an unpruned stand, harvested age 30, waste thinned at age 6 to 450 spha.

The choice of harvest age is dependent upon the crop owner's principal stand objective (timber, carbon, etc).

Graph shows CO₂ equivalent (CO₂ tonnes = 44/12xCarbon tonnes).

Export and domestic Log Pricing



Source: MAF

Log pricing data

| Log Type, Pricing Point and Market | Jun-04 | Sep-04 | Dec-04 | Mar-05 |
|--|-----------|-----------|-----------|-----------|
| | Quarter | Quarter | Quarter | Quarter |
| Export (\$NZ per JAS m³ f.o.b) | | | | |
| Pruned-Japan, Korea | .. | 142-249 | 139-217 | 134-183 |
| A Grade-Japan | 74-115 | 58-96 | 64-100 | 83-90 |
| J Grade-Japan | 54-91 | 57-76 | 55-80 | 73-79 |
| K Grade-Korea | 54-101 | 50-70 | 45-75 | 70-100 |
| Pulp | 40-46 | 41-47 | 43-54 | 47-65 |
| All grades average per quarter | 93 | 89 | 87 | 92 |
| Domestic (\$NZ per tonne delivered at mill) | | | | |
| P1 | 138-169 | 146-177 | 139-171 | 130-145 |
| P2 | 96-155 | 99-150 | 93-140 | 93-130 |
| S1 | 79-90 | 80-95 | 80-93 | 78-99 |
| S2 | 64-85 | 70-80 | 69-90 | 76-95 |
| L1 and L2 | 50-74 | 50-72 | 48-67 | 47-65 |
| S3 and L3 | 50-70 | 49-68 | 48-74 | 47-73 |
| Run of bush | .. | .. | .. | .. |
| Pulp | 37-48 | 33-39 | 36-41 | 36-47 |
| All grades average per quarter | 86 | 86 | 85 | 83 |

Source: MAF

| Jun-05 | Sep-05 | Dec-05 | Mar-06 | Jun-06 | Sep-06 | Dec-06 | Mar-07 | Jun-07 | Sep-07 | Dec-07 | Mar-08 | Jun-08 | Sep-08 | Dec-08 | Mar-09 | Jun-09 |
|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|
| Quarter | Quarter | Quarter | Quarter | Quarter | Quarter | Quarter | Quarter | Quarter | Quarter | Quarter | Quarter | Quarter | Quarter | Quarter | Quarter | Quarter |
| 133-227 | 145-236 | 139-149 | 128-200 | 141-170 | 173-178 | 153-232 | 144-230 | 112-133 | 101-114 | 101-114 | 121-165 | 121-165 | 122-175 | 198-216 | 169-206 | 126-158 |
| 85-95r | 82-93 | 88-93 | 70-99 | 94-100 | 104-119 | 106-111 | 114-122 | 96-120 | 93-109 | 93-109 | 92-96 | 93-98 | 88-103 | 121-133 | 95-131 | 95-106 |
| 72-80r | 53-77 | 72-81 | 76-87 | 80-93 | 98-102 | 98-102 | 114-120 | 107-118 | 90-106 | 90-106 | 80-85 | 70-84 | 90 | 112 | 116 | 85 |
| 48-86 | 58-90 | 78-82 | 65-86 | 75-88 | 87-111 | 93-110 | 107-111 | 90-108 | 72-88 | 72-88 | 76-82 | 70-87 | 80-93 | 106-116 | 86-116 | 85-102 |
| 45-62r | 48-56 | 50-57 | 48-64 | 57-72 | 65-84 | 73-84 | 59-78 | 57-70 | 45-62 | 45-62 | 45-62 | 58-62 | 68-76 | 75-93 | 56-94 | 65-86 |
| 93 | 94 | 89 | 93 | 97 | 112 | 116 | 120 | 101 | 88 | 84 | 93 | 90 | 101 | 132 | 119 | 103 |
| 135-147 | 139-143 | 130-137 | 123-140 | 124-154 | 133-147 | 128-147 | 130-137 | 123-141 | 123-141 | 123-141 | 118-141 | 118-132 | 120-130 | 116-126 | 116-128 | 116-135 |
| 99-142r | 98-108 | 94-128 | 90-129 | 97-111 | 99-130 | 93-115 | 93-107 | 98-111 | 92-111 | 97-111 | 92-107 | 92-105 | 93-105 | 89-109 | 95-107 | 93-107 |
| 78-92 | 77-93 | 80-93 | 80-92 | 81-91 | 82-93 | 82-86 | 86-88 | 91-98 | 85-85 | 67-87 | 82-87 | 81-87 | 80-87 | 89-96 | 85-97 | 84-90 |
| 60-90 | 74-88 | 73-88 | 63-89 | 80-92 | 75-93 | 82-90 | 63-93 | 90-94 | 85-94 | 82-89 | 57-88 | 61-85 | 57-85 | 78-89 | 75-88 | 77-87 |
| 51-65 | 51-65 | 50-69 | 51-67 | 58-75 | 58-77 | 58-87 | 63-76 | 73-96 | 59-80 | 60-79 | 57-70 | 57-76 | 60-69 | 69-75 | 70-76 | 68-72 |
| 51-76 | 51-77 | 50-74 | 48-73 | 57-78 | 53-73 | 58-73 | 63-76 | 68-82 | 64-76 | 56-71 | 57-69 | 61-65 | 57-65 | 63-67 | 64-69 | 64-67 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 35-49 | 37-49 | 38-50 | 38-51 | 38-52 | 39-51 | 40-52 | 41-56 | 40-55 | 41-53 | 41-52 | 40-51 | 40-55 | 39-56 | 41-62 | 40-64 | 40-62 |
| 84 | 82 | 82 | 81 | 85 | 86 | 85 | 86 | 90 | 86 | 83 | 80 | 80 | 79 | 84 | 84 | 83 |

WITH THE COMPLIMENTS OF:



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