P.O. Box 602, Blenheim 7240, New Zealand Phone 03 578 1733 Website: www.marlboroughforestry.org.nz
Fax 03 578 1737 Email: info@marlboroughforestry.org.nz

September 2007 Newsletter

View From the Treetops

While the log export market is still sorting itself out, and it could be the end of the year before log markets in key Asian countries hopefully improve, the domestic market is proving resilient and demand for pruned and smaller branched, larger diameter logs, is strong. Recent declines in the $NZ are helping the saw milling industry's profitability and hopefully this may eventually see a lift in domestic log prices paid to growers.

For those forest owners interested in growing Douglas fir, but were put off by proposed changes to the building code, there were a number of interesting articles in the recent Tree Grower, August 2007, magazine. It seems that one major forest owner in the southern South Island intends to convert much of their Pinus radiata stands to Douglas fir. Provided Douglas fir is planted on suitable inland sites it will out-perform radiata, especially where snow is likely to damage radiata.

This week's MFIA visit to Shakespeare Bay to view the log ship loading, organised by Aaron Robinson (from Weyerhaeuser), was very interesting and informative, despite the wet and windy weather.

When I compare my time spent at Timaru wharf following the 1975 wind storm that flattened large areas of Canterbury forests, which featured ongoing demarcation disputes between unions and excessive over manning at wharf-side, to the present day loading of ships such as the one we visited, the Clipper Lake, it made me realise how far more efficient and productive things are today.

Our group was met at the main security gate and transported by Port Company staff to the contract workers' smoko room/office, close to the ship. We were given a briefing on safety requirements to expect on board ship and in the general yard area as loading of the ship was in full swing. Several people addressed our group on the current use of the Shakespeare Bay storage area, which is used primarily for logs, but is also being used for trans-shipping of pipes and anchor chain for use on the oil fields off Taranaki. It was interesting to hear how careful planning is required for both loading and unloading logs at point of discharge for the individual orders contained on a single shipment of logs. The captain and crew of Clipper Lake gave us a tour of the engine room and bridge of the ship, from where we had an excellent view of the logs being loaded.

An ACC representative from Nelson also attended and spoke to the group about preventative safety and encouraged foresters to attend a free one-day safety course that could result in a reduction in our ACC levies. For further information please contact Graham Sharland, phone 03 5716203.

This is the last newsletter prior to the AGM, which is to be held on 13 October 2007 at Vintners Retreat (more details later in this newsletter). I look forward to seeing you there.

John MacKenzie

Stop press

A shipment of Zindia logs have been cancelled by Port Marlborough to stop the use of toxic gas methyl bromide.
This puts the Shakespeare Bay Port out of the roll as a final loading port for Zindia's log ship for India unless a solution can be found. At this point Marlborough will see less Zindia log ships because the final loading point will have to be at an

alternative port. This cancelled ship will cost the Marlborough economy between $500,000 to $600,000. It appears that Port Marlborough cancelled this ship because of public pressure. The monitoring of the methyl bromide by the Port has had zero detectable levels.

Weyerhaeuser Forest Sale

Weyerhaeuser Company announced on June 27 that the company is signing of a letter of intent with Global Forest Partners LP (GFP) to purchase their Nelson Joint Venture in New Zealand. This is part of a strategic move to focus Weyerhaeuser's international timberland investment on South America. Under the agreement, GFP investment funds will acquire Weyerhaeuser New Zealand, Inc., and Weyerhaeuser's interest in the Nelson JV assets. These assets include approximately 67,000 productive hectares of plantation forests in the Nelson/Marlborough region and the Kaituna sawmill at Renwick, which has a log input capacity on a single shift of 80,000 cubic meters annually.

"This agreement significantly restructures our international holdings in alignment with our long-term strategic direction, simplifies our investment and management structure in Uruguay and maximizes our flexibility," said Craig D. Neeser, Weyerhaeuser senior vice president, Industrial Wood Products and International.

"New Zealand already plays an important role in our firm's diversified international timberland investment portfolios and this agreement enhances that position," said Michael Edgar, director of Asia Pacific Investments, Global Forest Partners LP. "This agreement also underscores the view GFP that New Zealand is an attractive forestry investment location."

The asset will be called Nelson Forests Limited and the management company will be Nelson Management Limited.

It is expected that the sales process will be completed early in the 4th quarter of this year.

Aaron Robinson

Aaron Robinson Profile

I have recently joined the MFIA Executive committee after moving to Marlborough from Nelson. I am employed by Weyerhaeuser New Zealand, Inc., purchasing logs for the External Resources division.

I was brought up and educated in Marlborough.

My interest in forestry started from pruning a small investment block my parents own up the North Bank of the Wairau River. Deciding that forestry would be a better fit for me than following in my father's foot steps (Pharmacy) I moved to Christchurch to study for a Bachelor of Forestry Science at Canterbury University (graduating in 1995).

Since graduating I have spent the majority of my time working in forestry in Nelson, Marlborough with time in Hawke's Bay and British Columbia, Canada.

I have worked in most areas of the industry, including silvicuture/forest operations management, harvest planning/forest engineering and managing harvesting contracts/contractors. More recently I was the Shipping and Distribution Manager for Weyerhaeuser before moving back to Marlborough. My current role in external log purchasing is an area I have always wanted to work in. It is great to be doing a job I love in my home town.

In the MFIA I wish to contribute my time and energy to help members address the challenges and opportunities the industry faces.

Export Logs from Port Picton.

Export log volumes through Port Picton for the last four quarters were:

	Jas Cubic metres
Quarter ended 30June 2007	92,635
Quarter ended 30 March 2007	67,214
Quarter ended 31 December 2006	127, 691
Quarter ended 30 September 2006	97,753
Total for Year ending 30 June 2007	**385,293**

The period over January and February 2007 volumes were down due to space limitations as the log yard was being sealed and there were also salt exports.

Forest Industry Development Agenda

In 2004/05, the Government worked with the forest industry on a joint industry development process called the Forest Industry Development Agenda. The Government's high-level objectives for the agenda are to ensure forestry makes its optimal contribution to New Zealand's sustainable development and plays a key role in New Zealand meeting its environmental goals.

A market development initiative resulted in projects to promote wood products, to promote new ideas for building houses with solid wooden walls, and to reduce the use of pesticides in forests. A market access initiative is funding projects addressing non-tariff barriers affecting wood exports. A bio-energy initiative is looking to develop the use of woody residues as a bio-energy source. A labour and skills initiative is funding the development of facilities at the Radi Centre in Rotorua for wood-processing training. An excellence in wood design initiative has created two professorships at the Universities of Auckland and Canterbury.

Table 11.2: Forestry Industry Development Agenda funding

Initiative area	Government funds ($ mil)	Expected industry funds ($ mil)
Market development	8.0	2.7
Market access	1.2	0.4
Bio-energy	2.5	n/a
Labour and skills	4.4	n/a
Excellence in wood design	2.1	0.7
Total	**18.2**	**3.8**

Source MAF.

http://www.maf.govt.nz/mafnet/rural-nz/statistics-and-forecasts/sonzaf/2007/page-13.htm#TopOfPage

Chas

ERMA makes decision on 1080

The Environmental Risk Management Authority announced in August that it has imposed a new management regime on the use of 1080 in New Zealand.

From 1 January 2008 all aerial operations using 1080 will be actively monitored by ERMA New Zealand. ERMA New Zealand is also urging that further research be undertaken into alternative methods of possum control and into some of the effects of 1080.

The decision followed a full-scale reassessment of the poison 1080 (sodium fluoroacetate) and all substances containing it. The reassessment took over six months and involved 1400 written public submissions as well as two weeks of public hearings.

The control of possum is a very important issue for the forest industry and especially those forest owners who have boundaries with large tracts of indigenous forest. Its continued use, with a tighter management regime is seen as a constructive outcome.

Trouble looms for the Aussie sugar cane industry from pine trees

Australian forestry investment schemes are paying A$10,000.00/ha for land on which to plant trees. Previously the land was worth less than a third that amount for sugar cane growing.
It was estimated in the year to June, 8000ha of good sugar country was taken out of production.
Sugar production is not sustainable with land prices over A$3,000.00/ha. The Australian Federal Government's tax breaks for pine plantations would seem to guarantee the trees will continue to be planted.
This is from Alan Emerson view in the New Zealand Farmers Weekly, August 27 2007

Building our Future in Wood

This was the theme of the NZ Wood road show held in August in Marlborough with about forty people attending.

The presentation covers;

1. **NZ Wood Briefing**
   The launch of the exciting NZ Wood initiative, and find out how your business can benefit and contribute to building a prosperous future for forestry and wood.

2. **The Solid Wood Initiative**
   A presentation on the proposed initiative aimed at creating a renewed focus on solid wood processing research and development, which is pivotal to the future of the NZ forestry and forest products sector.

3. **NZ Environment Code of Practice for Plantation Forestry**
   The new Environment Code of Practice gives substance to industry claims that forestry is a sustainable and responsible industry.

   A detailed practical guide developed by NZ Forest owners Association, it is based on the experience and expertise of forest owners large and small. Endorsed by the Farm Forestry and Contractors Association, the Code is expected to be adopted in forests nationwide in the next 12 months

To order a NZ Environment Code of Practice for Plantation Forestry

The Code comes in two formats

1. The full Code of Practice – A4 format for reference in the office
2. A5 BEP Field Guide in a protective zip-up folder, suitable for day to day forest operations

Number of copies **Please send me the following:**

---------- Full Environment Code of Practice @ $150.00 including GST ----------

---------- A5 BEP Field Guild @ $25.00 including GST ----------

$5.00 per item to cover courier charges ------ items x $5.00 ----------

Total $ ----------

Name:

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Company:

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Address: ……

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Phone number: …….

Send with cheque for payment to:
FITEC, P.O. Box 137067, Parnell, Auckland or order online at www.fitec.org.nz or telephone: 09 356 8028 / Fax: 09 356 7350

NZ WOOD

Talking Points for Industry

1. Unlike most other raw materials wood is infinitely renewable.
   The more we consume it, the better our future will be.

2. Climate change is a global concern. Plantation forests combat climate change by absorbing excess carbon dioxide from the atmosphere and storing it in the wood used in buildings, homes and other wood products.

3. Every time we use wood we not only produce fine buildings and structures, but we protect the environment and the future of the planet.

4. Expanding the size of our plantation forests by planting more trees means that carbon dioxide is absorbed from the atmosphere.

5. New Zealanders love forests and wood and want to consume more. Wood is not only considered fashionable, sustainable and a material of the future, it's also an extremely versatile building material.

6. There is enormous potential to increase wood-use particularly in non-residential buildings. NZ Wood will provide the information, resources and tools to drive growth.

7. NZ Wood is supported by a range of initiatives including research and development, public education, information on the use of wood as a building material and information and designing with wood.

8. NZ Wood is an industry driven initiative with support from government through the Ministry of Agriculture and Forestry. The strength of the NZ Wood programme comes from the united industry approach that laid the foundations for its development.

9. What you can do? Spread the NZ Wood message across the industry and to the public. The potential for wood is enormous.

If you want more details email: info@nzwood.co.nz or phone 0508 69 9663

The make up of a tree (wood)

A tree is made up of mainly cellulose, lignin, hemicellulose and pectin.

Cellulose accounts for more than half of all living matter, and is the basic structural component of plant cell walls. Cellulose ($C_6H_{10}O_5$) makes up fifty percent of wood, and is the most abundant natural, organic compound in the world. Cellulose is stable and can resist grease and moisture very well. 44.4% of cellulose is carbon, 6.2% of cellulose is hydrogen and 49.4% of cellulose is oxygen. The bark contains 30% of cellulose.

Lignin fills the spaces in the cell wall between cellulose, hemicellulose and pectin. Lignin plays a crucial part in conducting water in plant stems. It forms a quarter to a third of the dry mass of wood. Lignin plays a significant role in the carbon cycle, sequestering atmospheric carbon into the living tissues of wood.
Paper is made from Cellulose and the Lignin must be removed from pulp before paper can be manufactured, the lignin is removed from pulp as sulphates.

Hemicellulose are imbedded in the cell walls, they bind with pectin to cellulose to form a network of cross-linked fibres. While cellulose is crystalline, strong, and resistant to hydrolysis, hemicellulose has a random, amorphous structure with little strength. It contains many different sugar structures.

Pectin is a natural component of the cell wall. It contains galacturonic acid and neutral sugars like arabinose and galactose. Pectin is used in jam, bakery products, milk and soy products.

Carbon Sequestering in Trees

During photosynthesis, tree convert carbon dioxide and water into sugar molecules and oxygen through a series of oxidation and reduction reactions. The overall equation for the photosynthetic process may be expressed as $6\,CO_2 + 6\,H_2O + \text{sunlight} \rightarrow C_6H_{12}O_6 + 6\,O_2$

Some of this sugar is stored, while most of it gets used by the tree for other purposes such as energy and structure. For instance, a great deal of the sugar is linked together to form cellulose which provides the structure for the tree.

If we look at this sugar from a mass standpoint, we see that a large fraction of it is due to the carbon. The fact that carbon has an atomic mass of 12, Hydrogen has an atomic mass of 1, and oxygen has an atomic mass of 16, mean that 40% of the mass of sugar molecule comes from carbon. Taking into account the other types of molecules that are found in a tree (proteins, lipids etc.), we find that about 45% of the dry mass (not including the water) of a tree comes from carbon. In other words, a 100 kilogram log of a tree that has been completely dried contains about 45 kilograms of stored carbon.

While each kilogram of dried tree is storing 0.45 kilograms of carbon, it has removed more than a kilogram of carbon dioxide from the atmosphere. This is because each carbon dioxide molecule contains two oxygen atoms. Using this data from above, this means that each carbon dioxide molecule has an atomic mass of 44, of which only 12 are due to the carbon and 32 are due to oxygen. Therefore, for each atom of carbon stored in a tree, 44 atomic mass units of carbon dioxide is removed from the atmosphere. This means that each kilogram of dried tree mass corresponds to 1.65 kilograms of carbon dioxide (CO_2).

Therefore a tree that grows to maturity in 30 years will remove twice as much carbon dioxide from the atmosphere during the 30 years then a tree that takes 60 years to grow to the same size in mass.

The dry weight of a tree is, in general, about one half of the green weight.

As an example a ha of 30 year trees in a pine plantation has say 600 tons (above the ground) of standing trees and has a 15% wastage (including branches) when harvested, giving harvested weight of 510 tons per ha.

The 600 tons per ha (above ground) of these 30 year old trees would have a mass dry weight of approx. 300 tons.

- This ha having 300 tons (300,000 kgs) of dry mass would have 135 tons (135,000 kgs) of stored carbon.
- This ha would have removed 495 tons (495,000 kgs) of carbon dioxide from the atmosphere and converted it into 135 tons (135,000 kgs) of stored carbon over the 30 years.
- This ha per year will remove an average of 16.5 tons (16,500 kg) of carbon dioxide from atmosphere.
- This ha has converted 16.5 tons carbon dioxide into 4.5 tons (4500 kgs) of stored carbon per year.

Marlborough has a stocked area (as at 1 April 2005) of 74,100 ha of forestry plantation which is converting 1,222 million tons of carbon dioxide into 333 million tons of stored carbon per year (based on details above).

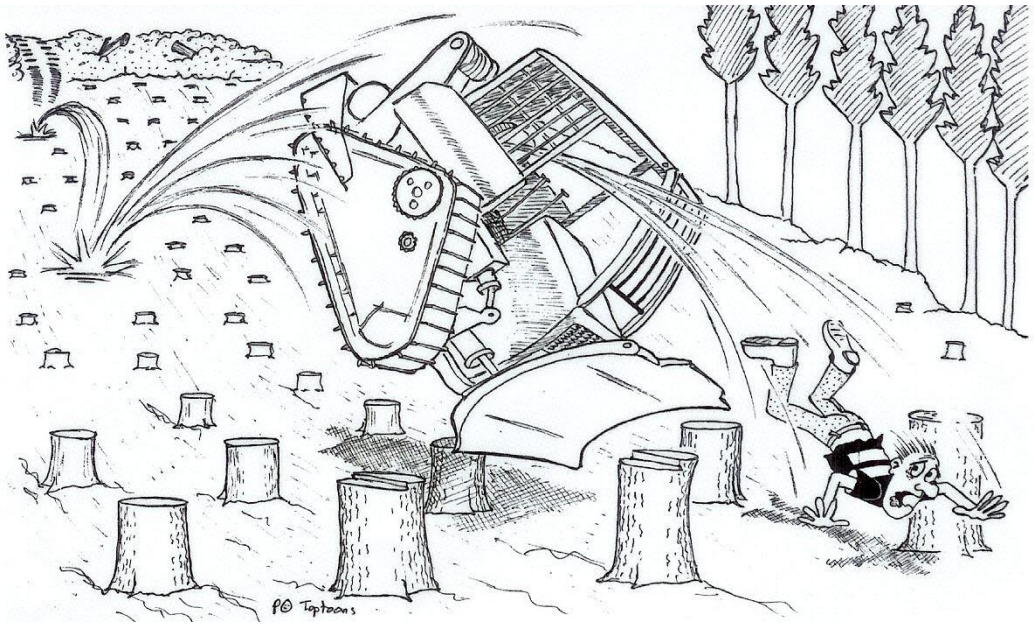
INDICATIVE MARLBOROUGH LOG PRICES SEPTEMBER 2007

GRADE	LENGTH	PRICE	DELIVERY POINT
Peelers - 42cm SED	2.6m & 5.2m	$120-140 per cu.m.	on truck Marlborough
Pruned sawlogs - 40cm SED	4.8m, 5.4m, & 6.0m	$136 per tonne	Marlborough sawmill
Pruned sawlogs - 40cm SED	3.6m & 4.2m	$115 per tonne	Marlborough sawmill
N35 Sawlogs - 35cm SED	4.8m, 5.4m, & 6.0m	$87 per tonne	Marlborough sawmill
Run of Bush - 30cm SED	4.8m, 5.4m, & 6.0m	$83 per tonne	Eves Valley
LVL 20cm	5.4m Sonics Required	$90 per tonne	NPI
Postwood	3m - 8m	$60 per tonne	Tapawera
Postwood	10m - 14m	$72 per tonne	Tapawera
Chip > 100kms from mill		$45 per tonne	NPI
Chip < 100kms from mill		$40 per tonne	NPI
Export KA	3.6m	$63 per jas cu.m.	Picton/Nelson
Export K	3.6m	$57 per jas cu.m.	Picton/Nelson
Export KI	3.6m	$56 per jas cu.m.	Picton/Nelson
Export A	6m	$67 per jas cu.m.	Picton
Export K	6m	$57 per jas cu.m.	Picton
Export KI	6m	$63 per jas cu.m.	Picton
Export KI	4.8m	$58 per jas cu.m.	Picton
Export KI	3m	$53 per jas cu.m.	Picton
Export KIS	6m	$50 per jas cu.m.	Picton
Export KIS	3m	$42 per jas cu.m.	Picton

While domestic prices are steady, export log prices have declined sharply since May.
The decline now appears to have bottomed with increasing shipping costs offset by the lower exchange rate.
Export log markets are still oversupplied and it unlikely that prices there will lift until the end of the year.

HAZARD ALERT

MACHINE ROLLS OFF HAULER LANDING WHILE PUSHING LOOSE SLASH



Background:

A machine operator escaped with only moderate injuries after the D6H Dozer he was operating rolled off a hauler landing while pushing loose slash over the edge. The operator was pushing slash parallel to the landing when one track slipped off the edge into loose material. In the process of trying to get back onto hard ground the machine lost traction when loose material started to fall away causing the machine to roll. During the roll over the operator was thrown out approximately 60 metres below the landing but was protected by logs and stumps while the machine rolled over the top of him and continued for further 15 – 20 metres before coming to rest in the same felled trees. The protective structure stayed intact, but the machine suffered extensive damage including the ripping off of the blade.

Concerns:

- The operator was not wearing his seat belt at the time of the accident.
- The slash was being pushed parallel with the edge.
- Assistance could have been sought prior to the machine rolling.

Learning from this accident:

- Always wear a seat belt when operating a wheeled or track machine.
- Push slash at right angles to the edge and maintain safe distance.
- If machine stability is a concern, stop operating the machine and ask assistance from a senior crew person.

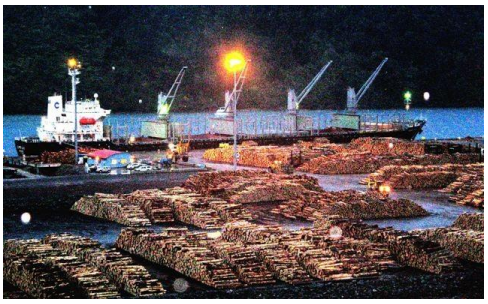
Shakespeare Bay Visit

By Penny Wardle

On the 4th September about 15 members gathered at the gates of Shakespeare Bay with safety vests and hard hats, before being delivered to alongside the 38,000 gross tonne logship ship Clipper Lake. The ship's master, Captain T. Sambandham (Sam) of Madras welcomed all aboard and onto the bridge where Coca Cola and soy milk was enjoyed along with the spectacular view of logs being loaded.

With 11,090 jas of logs from Nelson already on board, the ship was topping up with a further 14,127 jas in Marlborough

Toll-Owens oversees log marshalling for exporters Weyerhaeuser, Zindia and Rayonier. The job includes collecting and forwarding accurate data as well as the unloading of trucks and barges into the storage area and shifting cargo shipside in a timely manner.



Colin Smith of Toll-Owens said the biggest issue is with logs not butt-marked correctly, sometimes they are marked on the big end, or no butt-mark at all. This can cause a log to be ticketed on both ends which will show up in the records as two logs.

Michael Max of Supercargo Services is there to ensure that the Clipper Lake is safely loaded to

maximum capacity. The logs are loaded to 6 metres above the deck in the winter and 8 metres in the summer. In the winter logs are 6-7% heavier than in summer. To load this ship in one port it would take about 58 hours and to unload in Korea the logs will be loaded on to barges which will take 7 days. The barges take the logs closer to the mills.

This was Captain Sam's first visit to New Zealand, and he was impressed with the efficiency and accuracy of loading at Shakespeare Bay. From Picton, the ship would take about 17 days to reach Korea then sail on to Japan.

The ship's crew of 23 were with one exception from China. The officers are on five-month contracts, and were welcome to bring wives on board, but this was an all-male sailing. The rest of the crew were on six-month contracts. The 23 crew are divided into three shifts and are on 4 hour shifts.

Log exports below expectations

Port Marlborough shipping operations manager, Steve Redshaw, told the group that log exports through the Shakespeare Bay are below volumes expected when the deep-sea port opened in 2000.

About 360,000 jas of logs are shipped out through the port a year for Weyerhaeuser, Rayonier and Zindia; 7000-8000 jas per month delivered by barges and the rest unloaded from trucks. As well as logs, about 80 to 100 cubic metres of sawn wood from Weyerhaeuser's Kaituna mill is exported out of the port each month.

Of the eight hectares of storage in Shakespeare Bay, five hectares is used for logs. Log capacity was recently increased with the construction of 32 sets of five metre bookends, enabling higher stacks.

About three hectares is taken up with 30 kilometres of 12 metre steel pipes, to be welded into 440 metre lengths. A special vessel will come to New Zealand to roll up these steel pipes onto a spool and shipped to the Kupe oil and gas field off Taranaki, early next year. The lengths of pipe are rolled and welded in to 10 kilometres lengths. When these rolls are unwound the pipe comes out in one straight length of 10 kilometres.

Other cargos exported through Shakespeare Bay this year have included 27,000 tonnes of salt as well as sea anchors and chain bound for the Tui oil field off the Taranaki Coast. Due in mid 2008, are windmill components being imported from Europe and Vietnam for Meridian's Makara wind farm, near Wellington.

The log area was about 75% full. It had sometimes been chocker, mostly when logs came in without a ship in sight. At times, every port in New Zealand has storage issues.

A full report on the visit will be printed in Over the Gate on Wednesday, September 26.

Members assembling at Shakespeare Bay to visit the log ship Clipper Lake.