

# Wood Matters – August 2019

## Log Market - August



**Scott Downs**  
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### Market Summary

The CFR sale prices in China for New Zealand logs has increased to around 113 USD per JAS m<sup>3</sup> for A grade. Log supply into China has reduced considerably while log demand is still relatively healthy as they progress through their hotter months of the year. As demand in China increases and the log inventory reduces we expect CFR prices to increase further. The trade war and now potentially a currency war between China and the US could have an impact on log buyer confidence, and the resultant movements in the relative exchange rates will likely have a significant effect on September AWG prices.

There will likely be an increase in sawn timber inventory in NZ as some sawmills have signed-up to a supply of logs at lower prices yet don't have the sawntimber sales to match. The domestic market is currently two paced with reasonable demand for structural sawntimber yet weak demand for industrial grade sawntimber.

Due to the increase in the AWG prices the PF Olsen Log Price Index for August increased \$2 to \$114. The index is currently \$14 below the two-year average, \$13 below the three-year average, and \$6 lower than the five-year average.

### Domestic Log Market

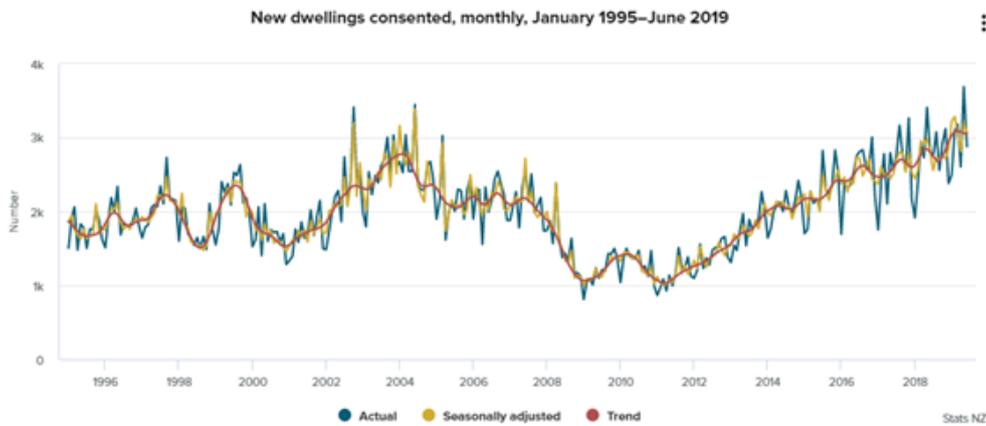
#### Log Supply and Pricing

The domestic log price movements from last month have stabilised and continued through August as Q3 log supply and price is locked in.

#### Sawn timber markets

New dwelling consents in New Zealand are still trending upwards at near record levels yet some sawmills report weaker demand. Opinion seems divided whether the demand for sawn timber is relatively quiet because it is currently winter or because market uncertainty is delaying the start of projects. There is agreement there is not sufficient infrastructure or capacity to build these consented homes though. Individual builders and small building companies report they are very busy with a solid schedule of forward work. Lower interest rates may further stimulate investment in housing, but interest rates have been relatively low for a while now.

Export markets for sawn timber get more difficult as you move down the grade mix. As reported all year the markets for clearwood sawntimber from New Zealand pine remains strong in Europe. The Asian markets are still vastly oversupplied with lumber.



*New dwellings consented: Stats NZ*

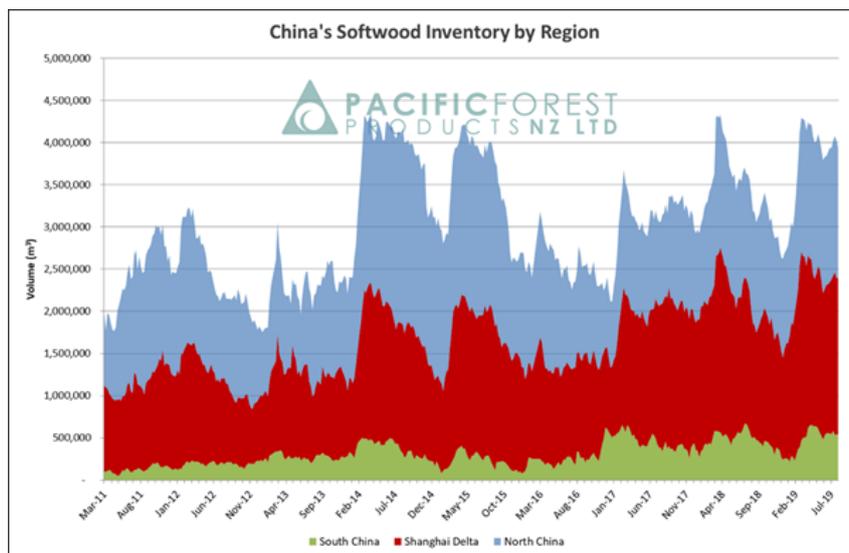
## Export Log Markets

### China

The CFR sale price for A grade logs in China has recently increased and now sits around 113 USD per JASm<sup>3</sup> and expected to increase next month. However, the more recent depreciation in the CNY against the USD is of concern as this has reduced the buying power of the Chinese log buyers. There was a similar sudden depreciation of the CNY this time last year which caused a drop in CFR and resulting AWG prices for one month. The market recovered quite quickly then due to steady demand and the stabilisation of the CNY against the USD.

There was a wide range of August AWG prices offered by log exporters with higher prices in some locations as exporters manoeuvred to maintain their position in the supply chain or made up shortfalls of volumes for pre-ordered vessels. We have also fixed modest increases in AWG with some exporters over the next three months to provide some owners with certainty.

Total softwood inventory in China is around 4.5million m<sup>3</sup> so has only risen about 600K over the last month. Daily consumption is currently 65-70k m<sup>3</sup> per day which is the same as this time last year. While the daily usage has dropped from the 73-74k m<sup>3</sup> per day used at the start of July, this was expected as the temperature increases in China. The demand is still reasonably healthy for this time of year in China.

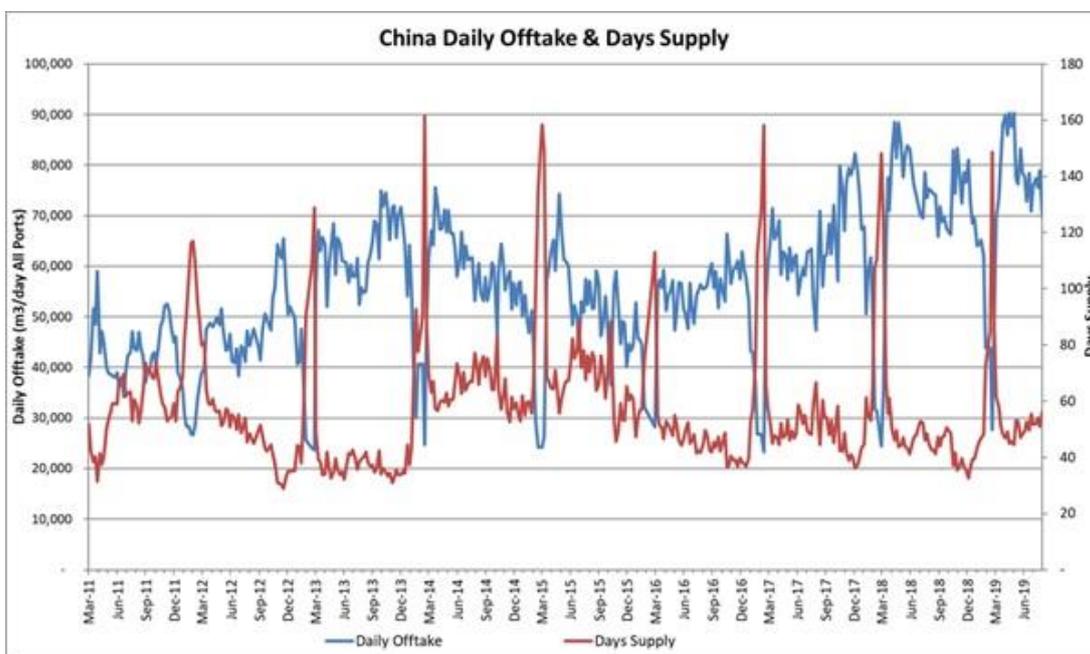


*Courtesy: Pacific Forest Products (PFP)*

Estimates of the reduction in log supply to China from New Zealand range around the 20% mark. An average of around 57 vessels were shipped from NZ over Mar-July and this is forecast to reduce to around 40 vessels in August. This reduction in harvest activity is likely to increase over the next month as harvesting is completed in the smaller woodlots and the owners of the next block don't want to commence harvesting in the current market. The supply from North and South America has also virtually stopped. The South American supply chain of pine logs to China is unlikely to be reinstated until the sellers can be confident the market price has stabilised above 125 USD per JASm<sup>3</sup> for A grade logs. Log supply from Australia has also reduced an estimated 25%.

This reduction in supply will assist with stock control in China and once demand increases as China moves into their cooler Autumn months we expect to see CFR prices steadily increasing.

Charted below is the seasonal impact on daily offtake and the annual spike in logs stocks reflected by calculating how many day's supply sit in stock. The spike this year is nothing unusual.



*Courtesy: Pacific Forest Products (PFP)*

**India**

Like most log traders in the world the Indian market is nervously observing the trade war between the US and China and its impact on log price and supply.

The output from sawmills in Kandla processing New Zealand pine logs has hit low prices of Rs 440/cft to Rs450/cft levels (from Rs500+ levels about six weeks ago). This has on one hand created a lot of market activity and nervousness as log inventories of New Zealand logs in Kandla devalue (these were bought at CFR 144-150 USD levels), yet also created aggressive demand due to price viability with respect to other competing species at Rs 440/cft levels. This demand boost is particularly visible in the packaging materials market.

At the current CFR price level, the Indian log market for New Zealand is more likely to adsorb five vessels per month from what has been the normal struggling four vessels per month. The largest price fall impact is in South African Patola pine which is now unviable at the last contracted price of 124 USD per metric tonne (P30 Grade/A30 Grade) compared to current New Zealand pine selling at 124 USD per m<sup>3</sup> for A Grade longs.

The Southern Yellow Pine from the US is now selling at 105 USD per metric tonne for 10 " (25cm) and above small end diameters (SED).

The second ever vessel of logs to India from Uruguay arriving mid-August was initially priced at 125 USD and then revised to 121 USD and ultimately expected to be priced at 110 USD or lower levels. The vessel has yet to have firm contracts and LCs and the 42,000 m<sup>3</sup> volume of logs has not initiated any sales. It appears that the Singapore Trader and the Uruguayan supplier are both in Kandla trying to salvage the situation. It is predicted that at 110 USD levels the business would be unviable from Uruguay and may get discontinued. On a long-term basis, the pine logs from Uruguay should sell with a minimum negative differential of 10 USD below New Zealand pine logs. The log buyers of volume from the initial Uruguayan vessel in Kandla have formed an informal group to demand compensation from the suppliers due to poor quality, recovery loss and grading issues.

The South India log market has run out of New Zealand pine logs and awaits a vessel arrival later this month in Tuticorin. The buyers are quite upset at this late arrival with an offer price of 137 USD for A grade whilst sawmillers in Kandla are currently paying 124-132 USD levels and selling their sawn timber to markets serviced by Tuticorin buyers.

**Exchange rates**

The New Zealand Dollar (NZD) has recently weakened against the USD and this will assist with AWG prices received by export log sellers. The CNY has also weakened considerably against the USD and this has reduced the buying power of the Chinese log buyers. How the US reacts and the resultant movements in the relative exchange rates will have a significant effect on September AWG prices.



NZD:USD



CNY:USD

### Ocean Freight

Owners are progressively moving to clean fuel tanks and refuel with compliant low sulphur fuel in anticipation of reduced sulphur fuel regulations from Jan 1<sup>st</sup> 2020. This is increasing operating costs but interestingly freight rates have not moved up significantly. Current freight rates to China are fixed in the mid-20s USD per JASm<sup>3</sup> on average which is low for winter months where log weight factors are at a maximum. We expect the clean fuel regulations to have significant impact on ocean freight rates in 2020 but are currently unsure of the quantum of this impact.



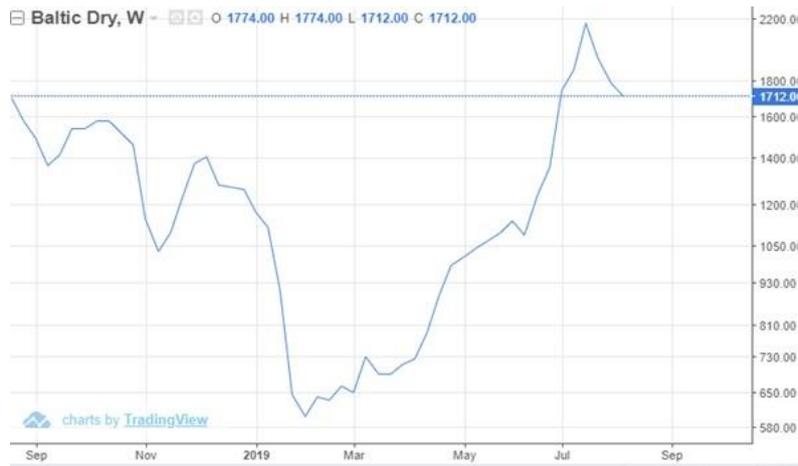
Source: Investing.com

The chart below shows the recent increases in bunker price. Singapore Bunker Price (IFO380) (red line) versus Brent Oil Price (grey line)



Source: Ship & Bunker

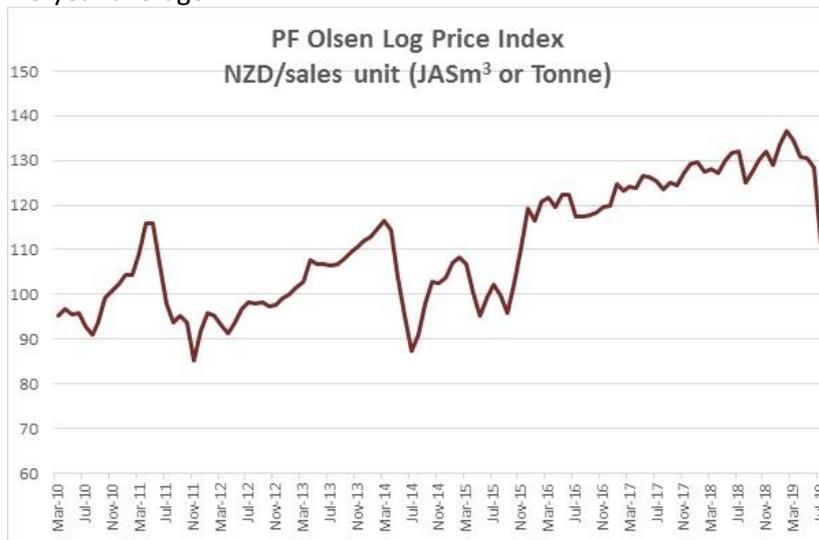
The Baltic Dry Index (BDI) is a composite of three sub-indices, each covering a different carrier size: Capesize (40%), Panamax (30%), and Supramax (30%). It displays an index of the daily USD hire rates across 20 ocean shipping routes. Whilst most of the NZ log trade is shipped in handy size vessels, this segment is strongly influenced by the BDI.



Source: TradingEconomics.com

### PF Olsen Log Price Index - August 2019

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*Basis of Index: This Index is based on prices in the table below weighted in proportions that represent a broad average of log grades produced from a typical pruned forest with an approximate mix of 40% domestic and 60% export supply.*

### Indicative Average Current Log Prices – August 2019

Log Grade	\$/tonne at mill	\$/JAS m3 at wharf
Pruned (P40)	170-190	140-155
Structural (S30)	125	
Structural (S20)	110	
Export A		107
Export K		101
Export KI		92
Export KIS		85
Pulp	51	

*Note: Actual prices will vary according to regional supply/demand balances, varying cost structures and grade variation. These prices should be used as a guide only and specific advice sought for individual forests.*

## Forestry and the Emissions Trading Scheme



**Mike Duckett**  
 NZIF Registered Forestry Consultant  
 PF Olsen Ltd

### ETS Announcement - Averaging

The Government announced a third set of changes to the ETS, including more detail on averaging accounting. Key points are:

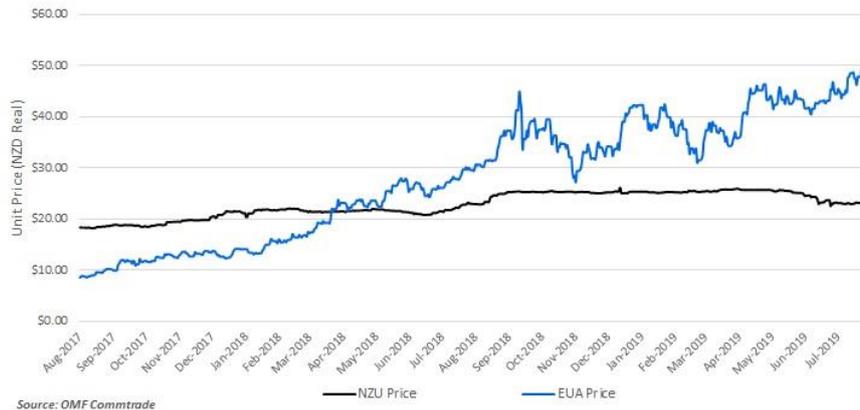
- Forests registered in the ETS before 2019 will **not** be able to transition to averaging. This decision will be reviewed in 2021.
- Forests will earn NZUs up to their forest's "average age". This age will be determined primarily by the expected harvest age, and age "bands" will be used to allow some flexibility in harvest timing.
- Forests joining the ETS after their first rotation will be considered to have already reached average age. These forests could therefore only benefit from averaging if they increase carbon storage (e.g. through increased rotation length, or change in species).
- Offsetting will be made available to post-1989 participants using averaging accounting. This ensures that some flexibility of land-use is maintained.
- Foresters using averaging accounting won't have to pay back NZUs after adverse events (assuming re-establishment occurs within four years). They will instead pause earning units until the forest has recovered to its pre-event level.
- Decisions made by current participants will stay with the registered forest. This means if a current owner increases rotation length past the norm, subsequent owners will have to either maintain the same rotation length or surrender NZUs if wanting to harvest earlier.
- There will be a stand-down period before deforested areas could be re-entered into the ETS as a "first-rotation" forest on the averaging approach, to ensure that they are actually "first-rotation" forests.

More detail on the decisions above (and others) can be found [here](#).

The government is planning further consultation on regulations pertaining to operational detail later this year. This will include how average age is calculated, design and application of age bands, and what the stand-down period following deforestation will be.

### Price update

NZU prices remained around the \$23.00 mark for most of July, before increasing at the end of the month. Prices rose to around \$23.85 by the end of the month, spurred by announcements around forestry averaging and phasing down industrial allocations.



## First production trial of a helicopter slash grapple



**Russell Dale**  
 R&D Manager  
 NZ Forest Owners Association

Erosion and debris flows from forestry operations is currently a live topic. Severe weather events in the Nelson and Gisborne regions last year caused localised debris flows of mud and ‘slash’ (woody debris from windthrown trees, broken tops and branches, and residues from harvesting operations) beyond the forest boundary on to neighbouring properties. Concerns have been raised about industry practice and the efficacy of management controls over plantation forestry.

At an industry workshop sponsored by Forest Growers Research Ltd on harvest residue management on erosion prone land in Auckland in August 2018, forest industry stakeholders supported a project to address improved extraction of slash from the cutover and adjacent waterways. One idea to reduce the risk of build-up of ‘slash’ on the cutover in steep forested areas was to design, build and trial a helicopter slash grapple.

A prototype multi-tine slash grapple was designed by Helihawk Ltd of Taupo and built by Colchester Engineering Ltd of Matamata in February 2019 (Figure 1).

**Figure 1: Helihawk Slash Grapple**



The site for the first production trial of the Helihawk Slash Grapple was a steep radiata pine harvest area in Kanuka Forest, Gisborne, managed by PF Olsen Ltd. The helicopter contractor undertaking this trial was Wairarapa Helicopters Ltd based in Masterton, and the pilot was Tim Williams a very experienced helicopter pilot.

Results of analysis of time study data linked to net helicopter payload as measured by an on-board load cell, showed average net extraction productivity of 18.5 tonnes per productive flying hour when extracting slash only. It was recommended that as much log material is extracted first before using the slash grapple.

In these conditions the cost of slash extraction averaged \$135 per tonne of slash removed, or approximately \$112 per metre of stream length. When the cost of cleaning the stream using the helicopter slash grapple was averaged

over the volume of wood extracted from the harvest area, the net cost was only \$1.05 per cubic metre of wood produced.

Using manual workers to remove harvest residues from steep or incised gullies, can readily be recognised as a dangerous task. Sending machinery down into gullies close to waterways to remove harvest residues, while effective, often results in soil disturbance and sedimentation of waterways.

This initial trial showed that the slash grapple designed, built and trialled by Helihawk Ltd was well matched to the task required and the helicopter used for the trial. The implementation of safe and efficient helicopter slash extraction substantially reduces or eliminates the unsafe nature of manual stream cleaning, and minimises the risk of negative environmental outcomes. While the environmental impact is low, high operating costs limit the use of helicopter slash extraction to sensitive or high risk areas only.

*Acknowledgement - Keith Raymond , Forest Growers Research Ltd*

### **Smart landowners welcome trees**



The campaign against forestry, most recently run by Federated Farmers Vice President Andrew Hoggard, assists neither the fight against global warming, nor the interests of New Zealand landowning farmers.

Andrew Hoggard has told the Environment Select Committee (Thurs 8 August eds) that trees only last 30 years and forestry is killing local communities.

The longevity of the individual tree is neither here nor there. Nearly all of our 1.7 million hectares of plantation forest are harvested at different times and then replanted with new seedlings. The forests themselves effectively go on forever, continuing to lock up massive amounts of carbon from the atmosphere.

Forestry adds to local employment, especially as the forests mature. The forest owners may not employ the workers directly, as they usually do on farms, but the forest workforce per hectare is considerably higher than that for sheep and beef farming. New forestry fosters local communities, not diminishes them.

In contrast, the number of farm workers on sheep and beef properties has been steadily decreasing for decades.

With a larger forestry workforce, goes a larger return on the same area. Per hectare, per year, the return from forestry is a number of times greater than that from farming sheep and cattle.

It's also Mr Hoggard's organisation's membership which appears to be realising these economics and doing most of the planting.

Recent foreign investment in planting new forests is negligible. Of the estimated 30,000 hectares of forest conversions along the east coast of the North Island this year, more than 90 percent are planting by New Zealand owners. Only four properties have been approved for new forest plantings by the Overseas Investment Office for all of New Zealand since new rules were introduced in 2017.

However, given the capital-intensive requirements prior to harvest returns, the area of conversion which will be required to meet our international greenhouse gas commitments is unlikely to be met through just domestic funding.

There is also more indigenous biodiversity in plantation forests than on pasture land. Year in, year out, trees also hold the steeper terrain better than any other land use. The water is cleaner under trees.

The recent National Environmental Standard for Plantation Forestry effectively removes harvest rotations from the more vulnerable landscapes. Plantation foresters want to avoid another Tolaga Bay debris flood and so they wish to plant more stable land.

But it is the capacity of trees to combat climate change and sequester carbon from the atmosphere, which has particularly provoked the campaigner insult that forestry is 'lucrative'.

Of course, trees are not a permanent solution to climate change, no matter how many countries are planting huge numbers of trees. But trees offer an absolutely crucial transition to other technologies, in particular those replacing fossil fuels.

A rising price of carbon units will indeed be a factor in enticing landowners to invest in trees as the most effective machines to fight climate change. For farmers, investing in trees is a healthy risk mitigation against the government moving them into large Emissions Trading Scheme obligations. They are offsetting on their own properties. Trees can give then resilience to both increasing carbon prices and becoming accountable for a larger percentage of these at the farm level.

Emitters, not taxpayers, are paying for the units the foresters receive. This is how the system is meant to work, though the price will have to rise even further to force these emitters to cut back substantially.

Those who own the hill country estate are best placed to take advantage of the fight against climate change.

The landowners have options of how much, and on what terms, they increase their forest commitment and take advantage of the carbon income stream.

The reports of world record temperatures in Europe last month, and imminent predictions of even worse, are terrifying. Unless the climate trend is reversed, buying New Zealand lamb might be the last consideration for consumers living under 50-degree heatwaves and facing rising seas.

Unless there is substantial planting of production forests, New Zealand will not only fail to meet its greenhouse gas reduction targets, but endure even deeper forced cuts in other parts of the economy, including emitters in agriculture.

For the most part, exotic trees are needed to achieve the climate change goals. Through their early decades, the carbon sequestration rate of pines and eucalypts is some six times greater than the carbon capture of kauri or totara.

With further investment in pine tree breeding, the growth speed of exotic pines can double in the next 30 years. The forests can absorb just as much carbon, and produce just as much timber, but they will be capable of doing it off half the land area.

A developing world bio-economy will create more jobs in new timber regions to construct new products.

Farm leaders would do well to see trees as a means for farm survival – not its demise.

Nonetheless it is inconceivable that sheep and beef farming will do other than continue to dominate the hill country.

With the right support and adequate transition assistance from central and local government, farmers will adapt to the new land use challenges, continue to decrease their emissions, and carry on feeding satisfied customers throughout the world.

Trees are only an interim solution for combating climate change. We must wean ourselves off fossil fuels and then wean ourselves off carbon-capture trees. In the meantime, plantation forestry, both large scale and woodlot, offers the only viable political or technical solution.

Trees globally, in a literal sense, give us a breathing space, both for us and our overseas customers.

*As reported by Peter Clark, former President, Forest Owners Assoc*

## **Quick 6 – August**

### **Ancient Kauri discovered with a record of the near reversal of the Earth’s magnetic field reversal in its rings**

A Kauri tree (*Agathis australis*) was uncovered under 8m of soil in Ngawha, Northland. The tree, which is 2.5 metres in diameter and 20 metres long, lived for 1,500 years between 41,000 and 41,500 years ago. This lifespan covers a period when the earth’s magnetic field almost reversed. During this period the magnetic north and south poles went on an excursion but did not complete a full reversal. This tree is the only living thing at that time we know in the world today and scientists can utilise the tree rings to now map more accurately the time taken for magnetic movement to occur.



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### **Hi-tech shirt to monitor forestry workers**

A project team of honour students has developed a prototype shirt that has inbuilt sensors to monitor heart rate variability as well as perspiration. Using these measurements, the shirt could signal when the wearer is starting to suffer from fatigue or dehydration.

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### **Terahertz imaging technique aids forest managers in earlier identification of insect damage in trees**

Insect damage of forest is becoming more prevalent as trees are subject to drought and other stressful periods more frequently or longer duration due to climate change. A new terahertz imaging technique could help slow the spread of these infestations by detecting insect damage inside wood before it becomes visible on the outside.

"Detecting the boreholes of wood-destroying insects is typically done by manually inspecting the wood, and the infected area of the forest to be removed is then estimated," said Krügener. "To our knowledge, this is the first time a technical method has been used to detect insect boreholes."

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**Bark: A building block for a circular bioeconomy**

Bark biorefinery technologies provide a new economic opportunity to convert an underutilised waste stream into a range of high-value materials and products. These could earn an estimated \$400-600 million per annum and contribute \$1.8 billion to New Zealand’s GDP. With infrastructure and relevant policies in place, regional biorefineries have the potential to add several thousand new regional jobs by 2050.



Coming up with methods that can extract and refine high-value chemicals and create new products in a bark biorefinery is at the heart of a new five-year Scion-led research programme supported by the Ministry of Business, Innovation and Employment’s Endeavour Fund.

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**Ethiopia plants 350 million trees in one day!**

Now this is something Shane Jones would be envious of. Ethiopia’s forest cover has reduced from 40% half a century ago to around 15% today. Like many other countries around the world Ethiopia has embarked on a tree planting program and claims to have planted almost 3 billion trees since May. One Monday, state employees were given the day off as Ethiopia’s Prime Minister Abiy Ahmed sought to get the rest of the country involved, and the government claimed a "record-breaking" 350 million trees were planted in only one day.



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**Guacamole lovers, rejoice! The avocado genome has been sequenced**

Studies have shown that the Hass avocado inherited approximately 61% of its DNA from Mexican varieties and 39% from Guatemalan varieties. The research also provides vital reference material for learning about the function of individual avocado genes, and for using genetic engineering to boost productivity of avocado trees, improve disease resistance and create fruit with new tastes and textures.



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