Log Market Analysis

As at 25 October 2019



Photo 1: Wairarapa region aerial check-up. Cleland Forest, 4 October 2019

The content of this Log Market Analysis is produced monthly as part of a suite of documents that comprise the regular reporting to forest owners during harvest. This standalone document is made available to other forest owners approaching harvest to keep them informed on market conditions.

We have included log price series separately for Wairarapa and Gisborne forests, as the price series differ for reasons including different customers, log specifications and locations.

Forest Enterprises (FE) is currently harvesting approximately 650,000 tonnes of logs per annum for Wairarapa and Gisborne forest owners. Most of these owners are Investors in forestry investments our company markets and manages, however some harvesting is undertaken for other forest owners.

Overall, harvest volume is increasing materially year on year.

IMPORTANT

Every effort has been made to provide current accurate information in this document, which is for information purposes only. Any opinions and views expressed are those currently held by Forest Enterprises, however the reader accepts that where they are opinions and views in respect of future prices, they may subsequently be proven incorrect. The nature of the international log market is that of price fluctuations, and these fluctuations can be material, and material changes can arise due to factors not previously able to be foreseen.



Overview

Log stocks in China dropped by around a million tonnes in September which is unusual and signals a turnaround in market sentiment. We continue to mourn the loss of the high prices. However, things are improving now, and the current situation is good enough to encourage long term forest owners to keep harvest operations running at rational levels.

We have had some relief with the NZD at decent trade parity, and heat has come out of the competition for access to loggers, port space and log trucks which is reflecting some cost savings.

The next big thing is the coming impact on shipping cost of the low sulphur fuel regulations, and additionally the management of log fumigation under tougher regulation.

We are pressing on with log harvesting and with some optimism. Doing nothing feels like a risky strategy in the long term given future uncertainties, so we stay in the woods.



Photo 2: Harvesting continues at quota levels for October 2019. Pinedale Forest, Wairarapa.

Wairarapa Log Prices Per Tonne

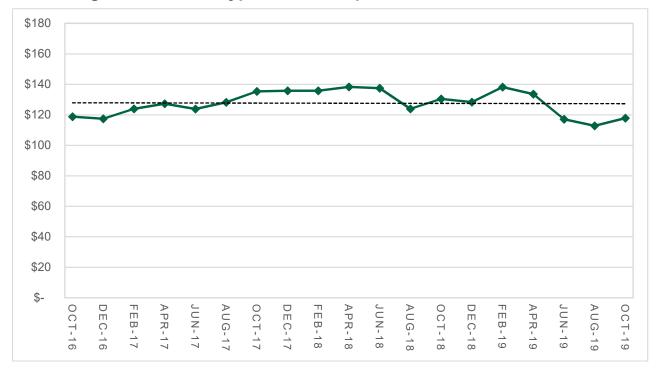
Grade	Forest Enterprises	Forest Enterprises	Current vs	Percentage of
	Sep-19	36 Month Average	36 Month Average	the 36m Average
Export P40	\$168.35	\$183.10	(\$14.75)	92%
Export P30	\$132.50	\$144.95	(\$12.45)	91%
Export A	\$112.65	\$135.40	(\$22.75)	83%
Export K	\$97.55	\$119.85	(\$22.30)	81%
Export KI	\$87.30	\$112.95	(\$25.65)	77%
Export Pulp	\$76.05	\$97.60	(\$21.55)	78%
Domestic P35	\$168.00	\$175.90	(\$7.90)	96%
Domestic S30	\$117.00	\$120.50	(\$3.50)	97%
Domestic S20	\$102.00	\$105.50	(\$3.50)	97%
Domestic Pulp	\$31.00	\$31.00	\$0.00	100%

Export sales units are volumetric (JAS) while domestic sales units are paid per tonne. The Export JAS prices have been converted to tonnes. Refer to page 4 for more detail on the JAS to tonne conversions.

Index Log Price	\$115.05	\$128.50	(\$13.45)	90%
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Index Log Price is calculated using inventory measurements from our Wairarapa forest crops and establishing an average log grade recovery for our typical Wairarapa Forest. Applying these estimates to our long run prices per grade has derived an Index Log Price. This index price helps to estimate the average logs sales predicted for a typical forest.

Index Log Price for our typical Wairarapa Forests



Gisborne Log Prices Per Tonne

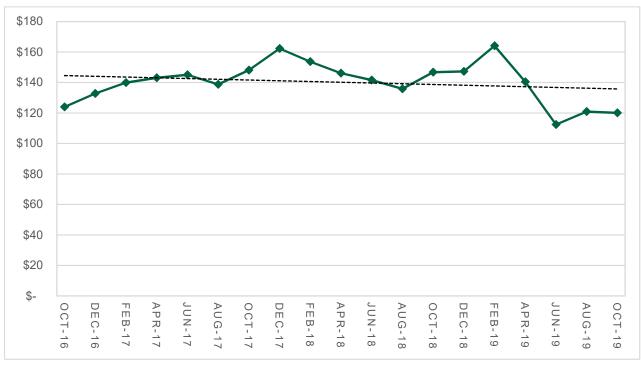
Grade	Forest Enterprises Sep-19	Forest Enterprises 36 Month Average	Current vs 36 Month Average	Percentage of the 36m Average
Export P40	\$159.45	\$180.45	(\$21.00)	88%
Export P30	\$123.00	\$148.05	(\$25.05)	83%
Export A	\$114.90	\$139.75	(\$24.85)	82%
Export K	\$100.80	\$125.10	(\$24.30)	81%
Export KI	\$95.20	\$114.55	(\$19.35)	83%
Export Pulp	\$82.20	\$102.60	(\$20.40)	80%
Domestic P35	\$175.00	\$179.60	(\$4.60)	97%

Export sales units are volumetric (JAS) while domestic sales units are paid per tonne. The Export JAS prices have been converted to tonnes. Refer to page 4 for more detail on the JAS to tonne conversions.

Index Log Price	\$118.16	\$138.19	(\$20.03)	86%
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Index Log Price is calculated using inventory measurements from our Gisborne forest crops and establishing an average log grade recovery for our typical Wairarapa Forest. Applying these estimates to our long run prices per grade has derived an Index Log Price. This index price helps to estimate the average logs sales predicted for a typical forest.

Index Log Price for our typical Gisborne Forests



Investors will notice that the Gisborne price series only includes domestic price for Pruned 35 due to log customers. As of July 2019, we have been supplying three domestic sawmills with pruned logs from our Gisborne Forests.



Factors Influencing Current Log Price

Key:

More Benefit to the Investor

Less Benefit to the Investor

Price, Costs and Logistics

Foreign Exchange (Forex)

Export logs are priced in USD. FE's rate in September was forecast at 0.6373. We last shipped at a rate of 0.6444 which is less favourable.

FE takes no forward position or hedge in currency trading. Hedging imposes transaction costs without giving certainty of improved outcomes.

Shipping

Fuel costs or bunker price continues to rise, infuencing ship charter rates. The change from high to low sulphur fuels is less than 100 days away. Log vessels are intending to use low sulphur fuel as its expected to be lower risk than installing expensive pollutant scrubbers. There is growing concern that the pollutant scrubbers have detrimental environmental effects by discharging high volumes of hot and dirty water directly into the ocean.

JAS to Tonne Conversion

JAS-to-tonne conversion rates remained consistent with September increasing from an average of 99.3% to 99.5% across all export grades. This is a good result and improves returns to growers.

Export logs are sold in Japanese Agricultural Standard cubic metres (JAS). JAS is a measure of useable log volume rather than weight. Payments to most contractors are made based on weight, which is appropriate for handling heavy material. This means the return to the forest owner is affected strongly by the conversion of weight to volume in the logs.

Conversion has seasonal trends and varies between log grades, length and log quality. Accounting for conversion is necessary to report comparable values from different sales options. Our convention is to report all prices converted to the 'per tonne basis', which would appear different if compared with a per cubic metre (JAS) series. Hence why our harvest reports show monthly JAS/tonne conversion per forest.

Log Price, Export CFR

CFR (Cost and Freight) is the price in USD paid by the end user/buyer.

China Price rising as demand is steady and inventories lower than the peak levels earlier.

South Korea Price lower than China, but poor market conditions for sawmillers.

<u>India</u> Price is rising, following China up.

<u>Japan</u> High lumber stocks in market depressing price.

Log Demand

Export Log Inventory in Market

China Inventory of logs in China is a leading supply/price indicator. Inventory levels in China have

declined to about 3.7 million JAS. Daily sales have fallen to about 65,000 JAS per day. Days of stock is inventory divided by usage and has risen from 49 to 56 recently; higher than in September. The speed that logs turn to lumber and lumber turns to cash drives market

sentiment.

Slow period, tough conditions for end users of logs, but lumber is cheap. Capital gains tax

imposed on owners of multiple houses.

<u>India</u> Stocks are low, demand is firm. Production rises as the monsoon finishes.

Japan Significant storm damage from recent typhoon may take years to fix. Manufacturing

shrinking in Japan.

Pruned Log Grades

Strong demand in both Gisborne region and the Southern North Island. Prices are holding up for good quality pruned logs.



→ Neutral



NZ Domestic

Domestic price and demand steady, with long term customers continuing to take our forecast production at good pricing levels. Woodlot activity is very low so domestic mills rely on larger forest suppliers to keep the gates open.



Housing and Business

Housing drives panel, lumber and furniture sales and therefore log demand. Housing timber use has two primary markets: new house starts, or remodel and renovate. These two uses have different cycles based on relative consumer optimism. There are certainly a lot of new houses being built in Masterton, and through many New Zealand towns.



Domestic Construction

Building trades are scarce and busy currently, as construction is high.

Log Supply

<u>NZ</u> Lower production levels still reducing log inventory numbers and

throughput on trains and in storage lease areas. This makes managing the distribution of logs to customers simpler and enables us to grow our

allocation of port space and market share at sawmills.

<u>Australia</u> Low activity.

<u>Europe and Russia</u>

Russia is coming into its seasonal low period. In eastern Europe, Germany

and its neighbours continue cutting forests to contain the spread of bark

beetle. This spruce is boosting rail deliveries into Western China.

<u>Pacific Northwest (PNW)</u> Trade wars seem to be uncertain and log exports are diminishing over time

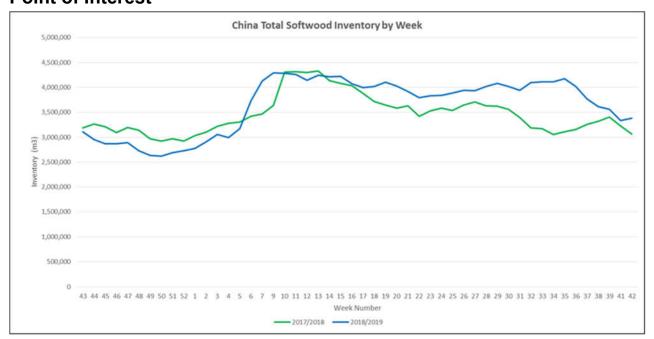
in response to changing conditions.

<u>US South</u> Housing market slowing.

<u>Other</u> Uruguayan production continues at low levels due to low price and high

supply chain cost.

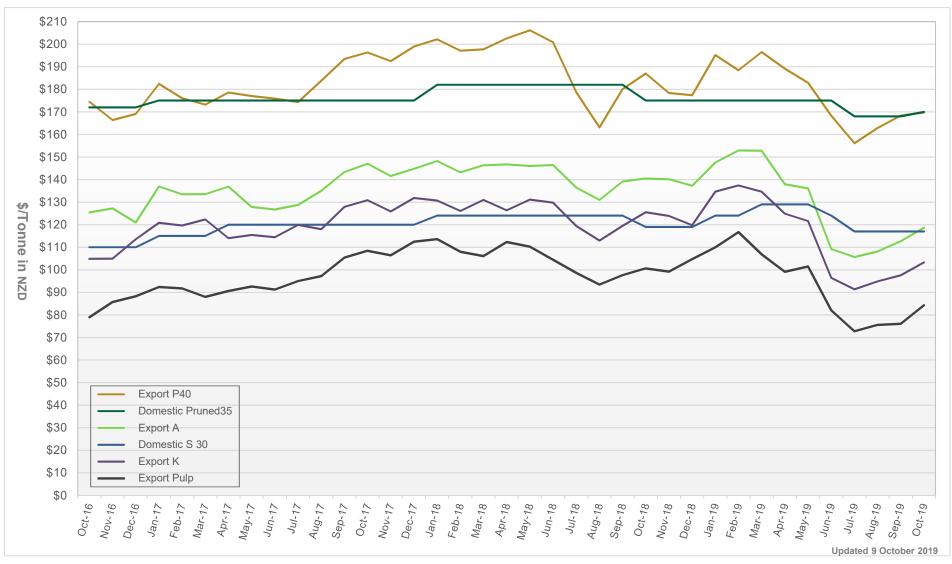
Point of Interest



PFP's view of the China log inventory position. PFP measures in-market inventory levels slightly differently to TPT Forests, our other main log export and marketing advisor.



Lower North Island Log Price Graph per Tonne



Log Price Graph: Tracks the key log prices for a 37-month period. The first 36 months are the months which comprise the average referred to under Log Prices per Tonne above. The 37th month shows the indicative prices scheduled for the current month. Export sales units are volumetric (JAS) while domestic sales units are paid per tonne. The Export JAS prices have been converted to tonnes.





