



OLSEN NEWS

PF OLSEN AND COMPANY LTD
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Log price update

Summary:

All export log markets in the Pacific Basin are in turmoil due to the problems in the Asian economies. Fortunately, domestic processors are active and the longer term outlook for NZ forest products is good. Foreign exchange gains have resulted in some NZ\$ price increases.

The New Zealand scene:

NZ domestic log prices have continued at levels similar to those at the end of last year. Some mills have stopped exporting to many Asian customers, but strong Australian, US and domestic markets have been helpful.

Log price movements have been spotty. Low grade logs have been cheaper from some areas, while prices for pruned butts in the Central North Island have risen.

The major changes are in export log sales. The Korean market has been very difficult and Indonesia has removed restrictions on log exports. Millions of cubic metres of logs are available for immediate export. All wood exports from Indonesia will now be “freely” traded.

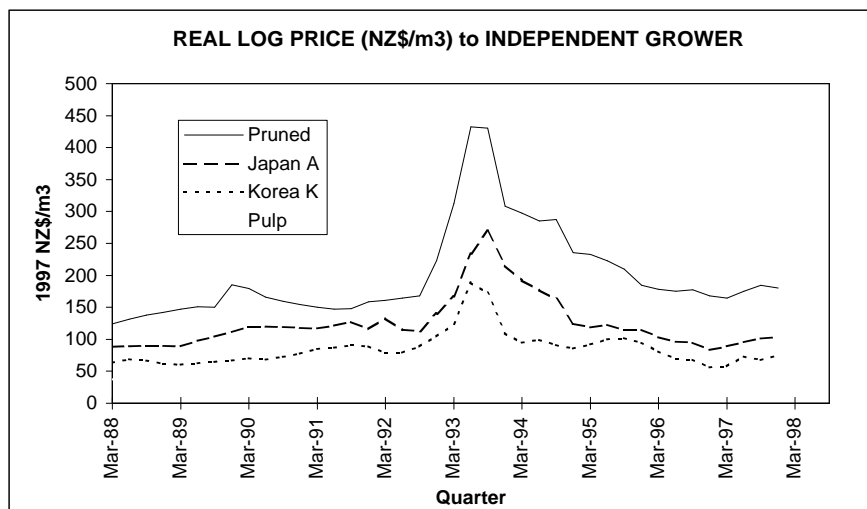
The El Nino dry spell has resulted in huge, unexpected stockpiles arising for a number of Pacific hardwood producers. The demand for hard currency will ensure that lumber and log volumes will be oversupplied until the forests are cut over.

The Japanese plywood industry has traditionally used tropical hardwoods. In recent years, over 20% of NZ log exports have been into the plywood sector and these volumes have been increasing. Japanese plywood demand has been for the better log grades at good prices. The huge availability of tropical logs is now coupled with a falling Japanese construction market. The woes of Japan's banking sector add to the gloom in this market.

The effects of Asian financial problems are outlined overleaf.

The next few months:

Prices for export log shipments from April onwards are being negotiated. Prices may fall in US\$ terms. Export volumes will fall from what would normally be traded.



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The domestic market is likely to be strong, although demand historically falls in winter. The strong domestic demand has little impact on price, as competition is intense.

New markets, such as India, continue to take volume, but cannot offset the fall in lumber and log volumes to Korea. Lumber exports will increase, particularly for higher grades. Due to this demand, some shortfalls in the supply of higher grades of logs and lumber should be expected.

The cash flow and balance sheet requirements of some of the larger forestry corporates will ensure continued pressure to reduce costs and the development of new markets.

Longer term outlook:

While speculation on timing of the Asian recovery abounds, the tropical forest resources of the Pacific Basin are being liquidated. In many cases, forest lands are being burnt for domestic cropping or conversion into rubber and oil-palm plantations. The forecasted timber deficits for the Asian region will be revised upwards and occur earlier, once the smoke clears.

The Effect of the Asian Financial Problems on Forest Owners

Korea's log buying: To date, the principal effect on forest owners has been the almost total withdrawal of Korea from log and sawn wood buying in December/January.

Korea is one of our largest markets. Last year New Zealand exported 3 million cubic metres of logs to this market. This is not an easy volume to shift elsewhere, especially as log markets in Thailand and Philippines have also been depressed.

Difficulties with Letters of Credit: While the underlying problem is the credit crisis in importing nations, manufacturers still want to continue their business. They are prevented from importing wood due to the difficulties in obtaining Letters of Credit. These are the financial instruments used by importers to guarantee payment to exporters. It is a banking problem and, while it exists, willing buyers have difficulty doing business with willing sellers.

Resumption of sales: Sales have now recommenced at a reduced level and reduced prices. It can be expected that the market will take some time to stabilise.

Pulp prices: Pulp prices have also been depressed. While this impacts on the earnings of major forestry processing companies, the price paid for pulp logs has only a minor impact on forest owners.

Effect on forestry stocks: The market price for forestry related stocks has fallen sharply. This

makes sense for shares of larger companies. They have to maintain their cash flows and falling prices mean lower immediate dividends.

Large growers lack the ability of smaller growers to defer felling until prices improve. While sales are deferred the trees continue to increase in value.

It is not logical for the values of forests to fall if their crops are distant from maturity, unless the fundamentals of future supply and demand have altered.

No change in fundamental supply or demand: There are no signs of any substantial change in the future supply and demand balance. Demand estimates are largely driven by demographics.

No new large sources of supply or cheaper substitutes for wood have appeared.

Forest value: Market sentiment should not be overlooked, however irrational. Sentiment has pushed down the value of shares in tree growing companies. While this negative sentiment prevails, buyers of forests will be looking for harder bargains. Wise sellers will sit tight.

Exchange rate: The falling NZ\$ has helped offset price drops where trade is denominated in US\$. The fall in the NZ\$, coupled with downwards price pressure on farm land and lower forest values, has created excellent opportunities for North American and European investors to buy forestry investments in NZ.

Forestry Inventory: What is it?

Inventory, or mensuration, is the forestry equivalent of stocktaking. This involves the measurement of trees to determine the quantity and quality of timber in a stand. To the private forest owner, the most important forms of inventory concern quality control, valuations and predicting yields. Various types of inventory focus on data collection for different purposes.

Quality control: During the early stages of a rotation, the quality of pruning and thinning operations need to be checked. Following an operation, the trees within randomly placed sample plots are assessed and measured to ensure that the required standard has been met. Quality control data are used to form a valuable record of the crop's history and helps to establish the amount of clearwood in a stand.

Mid-crop inventory: It is recommended that measurements also be made at the age of around 12 years. This is known as a "Mid-Crop Inventory" and is used, in conjunction with mapping, to collect baseline data for modelling of future yields and for crop valuation. At this

stage of a rotation, the pruning is complete and the crop has been thinned to its final stocking. Barring fire or wind damage, the trees are left alone to grow until harvest. Any data collected at this age, or later, can be used in growth models to predict yields and value the forest for planning, asset reporting, or taxation purposes.

Marvl: As the time of harvest approaches, it is important to predict the likely yield in order that maximum value can be returned at marketing. To establish the forest value prior to harvesting, a system known as "Marvl" is most commonly used. This is an acronym for the Measurement of Recoverable Volume by Log-grade, which provides a detailed analysis of what the forest can produce.

It is important to remember that measurement data are only meaningful when the area of the forest is established through good quality mapping. Without these valuable data, forest owners may have difficulty in marketing the forest produce to best advantage.

Olsen Inventory Ltd

Olsen Inventory Ltd is a subsidiary company of PF Olsen and Company Ltd, specialising in the supply of inventory services to forest owners. Formed in August 1997, Olsen Inventory is a 50:50 partnership between ourselves and the directors of Timberline Forest Services, formerly based in Hawke's Bay. Timberline was an established inventory service run by Andy Somerville and owned by his parents, Mr RC and Mrs AN Somerville. The new company is based in Olsens' head office at Rotorua.

Olsen Inventory has retained Andy as manager and uses trained staff with the latest available technical aids to provide quality data collection and processing. Important aspects of a dedicated inventory supplier are:

- crew training, motivation and diligence
- consistent interpretation of quality codes
- use and calibration of equipment
- accurate data processing

The new company combines Olsens' experience in mapping, harvest planning, logging and marketing with a proven understanding of mensuration principles to help customers gain maximum value from their crop.



Andy Somerville, Manager of Olsen Inventory Ltd

El Nino and pine trees

El Nino. The Boy Child. You've heard about it. It's been blamed for everything from dying shellfish to flat cappuccinos (in Auckland flat, cold cappuccinos). There is no doubt that anything with such a profound effect on the weather will have far-reaching consequences.

This summer will go down on record as one of the driest in the eastern parts of the country. The El Nino inspired ocean warming has produced a steady march of high-pressure cells over the country this summer. Most significant rain bearing systems have missed us to the south. The predominant westerlies have meant that any rain that does fall is on the western side of New Zealand. Eastern regions from East Cape to Otago are in the grips of a drought that has been well documented in the national press.

We can see the effects that this drought has had on our lawns and backyard vegetable gardens, but what is it doing to our radiata pine trees?

The effects of the drought can directly affect our forests through:

- increased fire risk
- increased susceptibility to disease
- amplification of any marginal nutrient deficiencies
- reduced growth, possibly deaths of trees

Fire risk:

Most people will be familiar with the Fire Danger signs along our highways, indicating the current fire risk in the area. It's also common sense that, during periods of drought, the arrows on the signs tend to rise to extreme fire danger. During these periods, forest owners should restrict access to their forests, maintain preparedness levels and make sure their insurance is up to date.

Disease:

Radiata pine is largely disease resistant compared with other species. Some of the more damaging diseases are caused by fungal organisms (*Dothistroma*, *Cylcaneusma*) which thrive in moist conditions. However, the drought can increase a tree's susceptibility to *Diplodea pinea*, another fungal disease. This fungus

invades through open wounds and causes leader dieback, crown wilt and whorl canker.

The fungus is present for most of the time and only needs favourable weather conditions for infection to occur. If pruning is carried out after long periods of drought, sap flow is reduced and the pruning wounds remain open for longer, increasing the chances for infection. Once infection does occur, the stressed state of the tree means that the fungus can colonise much more extensively. Pruning should be avoided during periods of extended drought.

Nutrient deficiencies:

On most sites, radiata pine does not need fertilising to maintain adequate growth. However, on some sites, one or more nutrients can be limiting to growth and applications of fertiliser may show an economic growth response. When trees are stressed under drought conditions, proper nutrition becomes even more important.

In particular, symptoms of boron deficiency can appear during periods of drought. Boron deficiency can be recognised by the death of leaders and top branches. Healthy branches can replace leaders during the following spring, but these also can die resulting in malformed trees.

Ulexite, a form of boron fertiliser, can be applied if foliar sampling indicates that lack of boron is limiting growth. Boron assists the development of deeper, healthier roots allowing better uptake of water. This has the added benefit of increasing wind-firmness.

Reduced growth:

Extended periods of drought will reduce growth to some degree because the tree shuts down to preserve what little water is available to it. In severe cases, and especially on marginal sites, tree death can occur. This is more likely in younger trees say, less than five years old, although there are reports of older trees dying in severely affected areas around Blenheim. Trees tend to die from the top down and from the outside in.

There is little the forest owner can do in these situations. Irrigation is not cost effective. Such situations can be avoided, to some degree, by careful site selection at planting. Sites to be avoided would be thin-soiled slopes facing north-west, or other drought prone areas.

There are other indirect effects of El Niño on forestry, and not all are negative.

The current dry conditions mean that there is probably no better time to log the trees on that swampy paddock out back. Ground which, in normal years, is too wet and soft for machinery, has dried out so that harvesting access is easier.

The recent extensive fires in Indonesia have been attributed to El Niño and have precipitated an increase in salvage logging. However, in the longer term, the resource has been diminished which is good news to growers of radiata in this country, whose products will need to compete in future markets.

This listing of the effects of drought on trees is by no means exhaustive. But it does cover the principal dangers of which forest owners and managers should be aware. The trees are under stress at the moment and should be watched closely for any signs of disease or nutrient deficiency. If possible, delay pruning until after the trees have recovered from drought stress. Access through the forest should be restricted to reduce the chances of a fire starting. Fire insurance should be brought up to date.

The El Niño phenomenon is already weakening as evidenced by cooling water temperatures in the Pacific.

There is speculation that next year will be influenced by La Niña (the Girl Child), the symptoms of which are an increased likelihood of cyclones. When the rains eventually come, you can raise a toast with what is promising to be an excellent wine vintage, thanks to El Niño.

Regional effects of El Niño

Gisborne and Napier

The wet, warm spring in the Gisborne and Hawke Bay areas allowed the 1997 plantings to get a very good start.

Survival plotting, being done now, is showing excellent survival rates.

The drought conditions do not appear to be affecting trees significantly and some good rains over the last two weeks should ensure stands remain healthy and growing well until the El Niño weather patterns end.

Dunedin

North Otago had the driest January on record this summer and growth rates have been affected. Unusually warm and wet conditions have combined to produce a high fire danger.

For new planting, containerised treestocks have had better survival rates than barerooted trees in the drought conditions.

Southland was buffeted by high winds for about a two month period. This has resulted in more wind damage than usual in older stands.

Blenheim

The effects of El Niño are as severe in Marlborough as anywhere in the country.

The drought has highlighted the boron deficiency in our soils with tip die-back, leader mortality and in some extreme cases whole tree death. To alleviate this it is essential that a fast and slow mixture of borate (Ulexite) is applied as soon as possible. This will increase terminal growth, root growth, tree stability and nutrient levels. As a result tree health is improved and the incidence of Diplodea reduced.

Several of our plantation owners on the south side of the Wairau River have opted to apply Ulexite this year ahead of schedule to combat some effects of the drought.

Environmental law

Environmental issues of every kind receive growing attention both here and overseas. In response to local demand for change and a need to stay abreast of international treaties, New Zealand has increased its focus on environmental law. This concern is reflected in comprehensive domestic legislation and agreements, many of which affect forestry. To understand and comply with laws as they affect our industry, specialist knowledge is required.

The Resource Management Act, administered through regional and district councils, is at the sharp end of legislation affecting forestry. The requirements of this Act are widespread and designed to avoid, mitigate and remedy adverse environmental effects of human activity.

Other legislation concerning archaeological sites, local culture, chemical use, transport, conservation and pest management, also place restrictions on many operations.

These laws have been developed in the interests of the environment but they often come at a high cost to industry and landowners.

In order to minimise the risk of litigation, environmental awareness has increased with regard to forestry operations. Olsens are playing a vital role in this process by participating in industry forums, submitting to regional plans and managing our clients' forests to avoid environmental risk.

Forestry is also affected by important non-legislative agreements such as the New Zealand Forest Accord and the Principles for Commercial Forest Management in New Zealand. These documents, agreed between the NZ Forest Owners' Association Inc and environmental groups, restrict the way forest management is conducted by the members involved. Both of these documents are seen as revolutionary and have earned New Zealand forestry high esteem internationally.

International pressure to produce sustainable forest products will ensure that environmental concerns will continue to mount in the forest industry. Olsens has recognised this and a specialised group within the company, Olsen Environmental Services, has been established.

Olsen Environmental Services

The complexity of environmental law and the weight of penalties against breaches, make specialist help worthwhile. Some of the services currently available from Olsen Environmental Services are as follows:

- systems and operations auditing;
- design of environmental management systems;
- assessment of environmental effects;
- provision of expert advice, both legislative and practical;
- preparation and management of consent applications and changes to consent conditions;
- submissions to council plans;
- design and implementation of environmental monitoring systems;

- preparation and provision of environmental workshops;
- preparation of documents, forms, sections for contractor agreements;
- ecological assessments;
- archaeological site management.

In order to ensure quality service, the company has undertaken ISO 14001 certification that focuses on environmental requirements. The Environmental Manager is Colin Maunder who has a Bachelors degree in forest science and a Masters degree in environmental science. Colin is based at Rotorua. Other specialists within the company are Rob Lawrence in Blenheim, and Ian Wallace in our Gisborne branch. Any of these people can be contacted for further information.

Gisborne District Council and Regional Plan

Ian Wallace has been working with representatives from other forest industry companies on submissions to the Gisborne District Council and Regional Plan. The deadline for initial submissions closed on 28 February and cross submissions will form the next step.

This work is important for owners of forests in the East Coast region as some significant changes are proposed. It is also important for owners of forests in other areas. The Gisborne District Council is further down the path of regional plan development than many other councils. Therefore, the regulations that are eventually agreed upon will set precedents that will be used by other councils as they draft their own policies.

The plan proposes some significant changes, such as:

- **20m boundary setbacks**

Under the plan, plantation forest trees should not be planted within 20m of the boundary unless the neighbour agrees otherwise. This distance is not supported by scientific studies. These suggest that aspect and topography influence the effect of plantation forest on adjacent farmland but that, in most cases, there will be no significant negative effect beyond 10m from the tree trunks. Indeed, there are some beneficial effects such as shelter for stock and protection from large-scale erosion.

- **Resource consent for tree planting**

Resource consents shall be required for planting, on rural land, of any species that will be more than 15m tall at maturity. Therefore the establishment of plantation forestry will require a resource consent, as will the operations of tree nurseries (even though the trees will not grow to more than 15m in the nursery)!

- **Adoption of DOC recommended areas for protection**

The Department of Conservation (DOC) Recommended Areas for Protection have been adopted by the plan as Protected Management Areas (PMAs). Any vegetation clearance in PMAs will require a time consuming and expensive public notification process. Effectively, these areas will be retired from use for plantation forestry or farming.

While we, and most of our clients, agree that areas of significant natural importance should be protected, we believe that landowners should be informed of any change of land use rights and have the opportunity to challenge the validity of the classification.

The plan is also quite prescriptive rather than effects based, as required under the Resource Management Act. Rather than regulating the effect of an operation, e.g. increase in sediment levels in water, the plan regulates the operation itself.

The plan also treats industries, undertaking similar operations, quite differently. Therefore vegetation removal by sheep or cattle is not subject to the same requirements as vegetation removal by other means, despite the fact that heavy grazing can cause severe erosion.

Ian will continue to work with other forest industry advocates to gather together relevant information, where necessary commissioning further research, and present this information to local government decision-makers in support of our submissions.

We hope that the end result will be a regional plan that fairly protects the community's interests by allowing economic development.

Satellite Imagery: Eyes in the Sky

Driven mainly by military concerns, the number and capability of satellites in the earth's orbit have increased dramatically in recent years. While satellite imagery has been available to civilians for about 25 years, it is only now reaching levels of resolution that can be useful in a wide range of applications. Satellite images allow objects only one or two metres wide to be visible from space.

This technology is being promoted for anyone involved in resource monitoring and has a number of advantages over aerial photography in many situations. Because the satellites have such a high vantage point, they are able to capture huge areas in one shot. Another advantage they have over aeroplanes is that they are in orbit all the time and regularly pass over the same points on the earth's surface. This allows for changing weather conditions, which can be a serious hindrance in aerial photography.

For these reasons, satellite imagery has become popular with local authorities and other

organisations monitoring land use over large areas. Despite amazing advances in technology however, the resolution of images from satellites is still not adequate for most forest mapping applications. Aerial photography has developed over many years to a very high level of accuracy. Such detail is necessary in an industry where we need to see young trees, foliage condition and individual vegetation types. Current photography can allow trees only two or three years old, with crown diameters of a metre or less, to be clearly visible and subtle colour variations are easily detected. Satellite imagery has a long way to go before it can offer this level of detailed resolution.

Due to the special needs of forest mapping, the forest industry still uses aerial photography on an operational basis. Satellite imagery does have applications in forest research but to forest companies worldwide, traditional photography remains the most useful mapping tool available.

PF Olsen and Company Ltd was founded in 1971 by Peter Olsen. Since then we have grown with the forestry industry. We now have over sixty-five staff operating from eight offices throughout New Zealand. The company is owned solely by its employees. Our Board of Directors is elected by the staff shareholders. All the shareholders have a stake in providing the best possible service to you and in maintaining our reputation as a leader in forest consulting and management.

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