

## MOBILE DELIMBER-DEBARKER-CHIPPERS IN NEW ZEALAND PRESENT AND FUTURE

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### INTRODUCTION

Most of you saw the Forest King in operation yesterday on the field trip. You now have some idea of the colour and size, and the sound it makes while it chews up trees and spits them out. You have just heard a LIRA paper that spells out pretty well our track record and batting average to date so I won't belabour that side of the project any further.

There are other more global points I feel compelled to touch on, or perhaps underline. You might wonder what were my motives in starting a project like this; what was the logic that made it take the shape it has? How do I see a machine like this fitting into our forest economy, and how do I hope it is perceived by the decision-makers and the entrepreneurs of the forest industry?

It should be made clear right up front. It was not solely for the purpose of self gratification that this project was taken on. It was a business decision.

It was perhaps something I wanted to do for a long time, but not until the time was right: when I was able to do it, when there was an obvious industry need, and when the industry was ready. Stir all these elements together and sometimes an entrepreneur can ride the crest of a wave and maybe make a dollar at it.

### BACKGROUND

Initially, we were involved in another development / machine which called for debarking and chipping as part of the process. That led us to research what was available in debarker-chippers.

This generated the enthusiasm for us to respond to an immediate, or near future requirement in the forest industry.

Because of the high capital cost of mobile equipment for debarking-chipping, it was obviously impractical to consider a salvage operation. We are not talking low investment, small volumes, high labour content "cottage industry" here. It was necessary to get right into a large volume supply resource. As in any mechanised operation, a large volume of wood and high production would be required to support the high capital involved.

When you talk about low capital and high capital investment, you have to say "compared to what?" Where do you put your decimal point? It is a realistic alternative to build a relatively lower cost, (\$1 million) mobile plant to go out to the woods to handle pulpwood instead of carting pulp to a fixed millsite with all its problems of rubbish disposal, scheduling of log trucks and chip trucks, to name a few.

When compared to harvesting old crop plantation wood, tree size is progressively getting smaller. This means that the one tonne log from the 5-tonne old crop tree gives way to the 0.33 tonne top from a 2-tonne new crop tree. Today it is not so necessary to have a big capacity stationary, big capital (going into millions) debarking-chipping plant to process what is coming up.

There is a problem however with timing. You have a moving target as a raw material resource or supply. The tree size changes quickly. What was 0.35 tonnes per tree last year is 0.45 this year and will be 0.55 next year. You all know that the annual volume available will mushroom dramatically within the next decade.

The share of that suitable for pulpwood will increase accordingly.

There is a fixed, on-going domestic demand for pulpwood. Unless new mills come on stream or existing mills increase their capacity, however, there will not be a domestic demand for the extra fibre which is growing even as we speak.

At this moment there is a strong overseas demand for chips. New Zealand is in a good position to respond to this demand immediately.

To get back to the "moving target", a stand may have been planted to produce a pulpwood crop. It can get away, however. Unless the stand was carefully tended (pruned, etc.), the bigger trees don't yield good sawlogs and it is still pulpwood. Only now more effort and more dollars are required to handle it e.g. splitting, large debarkers etc.

The key is to process the wood at the right time, age and size, when it is due. It may even be necessary to start earlier, that is, in stands younger than the traditionally accepted "right" age. We have provided a tool which can be used strategically. Its mobility allows it to be put in the right place at the right time. The solution can be in place sooner, for less investment than a permanent chip manufacturing plant.

So this was why I saw the need for a machine like the Forest King. At Wood Processors Ltd., we built it. It works. Overall chip quality has been excellent.

There are three pertinent points to consider while that hectare of plantation trees accumulates more fibre. We have shown a way to make chips in the right place when the stand is ready. A fixed domestic demand for chips remains a limiting factor. Marketing that extra fibre overseas could be a problem someday. Today it is not. I leave the ball in your park.

#### FUNDING ASSISTANCE FOR PROTOTYPE MACHINES

The machine was built without any funding from forest industry or government. Perhaps we did not investigate these possibilities deeply enough.

We did not ask.

When the machine was near completion, Keith Raymond of LIRA brought to our attention a government assistance programme which resulted in some funds to defer some of the commissioning costs. These programmes are not obvious to find, and not easy to get because of a disheartening amount of red tape. I can thank LIRA for directing us to that assistance programme.

I take this opportunity to put forward my own view of funding of prototype machinery for the forest industry. I propose that all contractors, be they loggers or hauliers, plus the forest companies themselves, and government should pay into a Research and Development account. There is no need to form a new government board or industry association to administer such a fund. LIRA should do this. A screening Committee, drawing technical advice from those in the forest industry who are qualified to do so, could evaluate projects thereby ensuring that the money was spent correctly. In this way, innovative people could vent their ideas through this LIRA "finance fund" committee. With a bit of vision, a promising idea could receive some preliminary funding to take it another feasibility step.

The above funding project could also assist forest companies, through LIRA, be it mill or bush, for problem areas which some entrepreneur could assist with or come up with ideas (possible solutions to particular problems, for example debarking eucalypts).

#### LIRA PARTICIPATION

Since this is a LIRA seminar, there is another point I want to bring out. At the first discussions with LIRA on chain flails and chippers, Keith Raymond mentioned about Gordon Franklin from FERIC Canada coming to New Zealand for a year. On his arrival, the machine was three parts finished. Having Gordon here at LIRA has been a bonus for us because of his knowledge of flails and through having LIRA monitor the chip quality and bark content. This was the first time I had been asked what LIRA could do to assist me.

**SUMMARY**

To sum up, there was a need for a special machine. We, at Wood Processors Ltd, built one, and proved it works. If good strategy is employed, mobile chippers can have an important impact on the competitive position of New Zealand's forest industry. There are other innovative Kiwis who are able to find solutions to specific forest harvesting and processing challenges, provided they are given a bit of encouragement and support. During the course of this seminar you have heard solutions to machinery problems from Dave Cochrane, and from overseas guests.

I can see the future of forestry in New Zealand being an exciting time for those who want to get up and get going. Give us some support to help you.

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