

SWEET SUCCESS AT SCION

SCION SCIENTISTS HAVE SUCCESSFULLY DEVELOPED AN ENZYME-BASED PROCESS FOR CONVERTING CHEMICALLY-PULPED SOFTWOOD INTO SIMPLE SUGARS.



Scion scientist Ian Suckling with the results of the lignocellulosic biofuel initiative
 L to R: wood chips, wood fibre, pre-treated substrate and soluble sugars in solution, together with lignin and undegraded carbohydrate

This is a critical step toward creating liquid biofuels from cellulose and hemicellulose – a step that many other researchers around the world have struggled to master.

Dr Ian Suckling, leader of Scion’s bioenergy and biofuels research team, hopes the process – which will utilise the industry’s pulp making infrastructure – will prove to be commercially viable once it has been developed further.

“Our key breakthrough has been to develop a pre-treatment which allows the cellulose and hemicelluloses in radiata pine to be efficiently converted to simple sugars like glucose using an enzyme-based process. Softwoods like radiata pine are among the most difficult feedstocks to do this with.

“Independent laboratory analysis confirms that sugars produced by our process can be converted into transport fuels like ethanol and butanol. Using them to produce other products like bio-plastics will be relatively straight forward.”

He says parts of the process have been run

at a pilot scale and others in large lab scale, but it has yet to be demonstrated in one continuous operation. That will require a dedicated pilot plant – something that was beyond the scope of the project.

Nevertheless, at all stages of their research the Scion team took a commercial approach, using a model that accounted for material inputs, energy balance, capital and operating costs to guide their research. This model identified large cost reductions from the pre-treatment of pulp and the use of new enzymes that created high monomeric sugar yields.

Known officially as the Lignocellulosic Biofuel Initiative, the three-year project has been financed by the Ministry for Science and Innovation using public good science funding. A team of experts, including scientists from the National Renewable Energy Laboratory in Colorado are impressed with the results and have recommended that Scion should identify a partner for the next stage of development.

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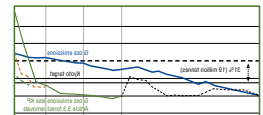
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Suckling says there is a huge amount of work going on worldwide on the conversion of lignocellulosic materials – such as wood and corn stover – to produce biofuels such as ethanol via a range of different processes.

This is driven by ethical and environmental concerns about using food crops like maize to generate transport fuels. In New Zealand, plantation forests are the only potential source of feedstock available at sufficient scale to make biofuels a potentially viable option. If this can be achieved, it will provide the country with increased energy security and reduce the transport sector’s greenhouse gas emissions.

According to the US Department of Energy, cellulosic ethanol has the potential to reduce greenhouse gas emissions by 90% compared with petroleum based fuels.

In late July Clariant, a Swiss chemical company, opened Germany’s largest pilot plant for the production of cellulosic ethanol from agricultural waste in Bavaria. One of many such pilot plants around the world, the €28 million project, supported by the German and Bavarian regional governments, is expected to produce up to 1000 tonnes of cellulosic ethanol from around 4500 tonnes of wheat straw.

The process used by Clariant also uses patented enzymes to convert cellulose-based plant residues into sugars for subsequent fermentation into ethanol.



GREEN IS THE COLOUR OF COURAGE

THERE IS A GROWING TIDE OF CONCERN THAT NEW ZEALAND IS FAILING TO GRASP THE POTENTIAL THAT GREEN GROWTH OFFERS THE ECONOMY AND THE ENVIRONMENT.

From the World Wildlife Fund to Pure Advantage, a forum representing some of New Zealand's most successful business entrepreneurs, the message is clear: green technology is the key to New Zealand's economic future, but without government leadership it won't happen.

For an industry like forestry this lack of leadership is very frustrating. All the soothsayers agree we will have a pivotal role in the green economy of the future, but at that point the highway becomes a maze of boggy tracks.

The Emissions Trading Scheme may be a useful badge for our diplomats to wear in international forums, but price signals are too low to make anyone want to adopt low carbon technology, let alone plant carbon forests (*see separate story*).

Biofuel is a buzzword that crops up in official papers every now and then. But once again, there are no meaningful incentives for investors to create factories that will turn forest and crop wastes into biofuels.

Sweden and Finland are doing this in a big way, thanks to government incentives, such as fuel pricing policies that favour greener fuels.

In New Zealand we aren't doing that for a range of reasons. Our history of 'picking winners' is a sad one. There is also a fear that we might cost our exporters dearly by becoming world leaders where we should be close followers.

The reality is that we don't have to pick winners. The world has already agreed that the clock is ticking on fossil fuels, in terms of both supply and their environmental sustainability. The role of government is to create the economic platform where the winners can pick themselves.

Nor do we have to worry about being leaders. Our trading partners in Asia – China, Japan, Korea, Singapore and Taiwan – are already doing that; making huge investments in transforming their economies to make them less reliant on fossil fuels. So too are places we often compare ourselves with, like Europe, Scandinavia and California.

The premise that there is a risk of New Zealand getting ahead of the pack is embarrassingly insular and ill-informed. Unfortunately, this view is strongly held by many New Zealand businesses and is reflected in the tepid findings of the government's Green Growth Advisory

Group in its report *Greening New Zealand's Growth*, released in March.

The reality is that while our political debate has focussed on the cost of change, other countries have focussed on what change has to offer economically, socially and environmentally.

As forest owners we don't claim to be paragons of virtue. But circumstances have forced us to embrace the new green order that will inevitably rule us all.

The district plan rules governing forestry are generally far stricter than those facing other land users doing the same things and having similar off-site effects. Yes it's unfair. But we've got on with business and are now hugely proud of our Environmental Code of Practice and our steadily improving environmental performance.

Membership of the Forest Stewardship Council also brought new challenges. Participation requires greater monitoring and recording of biodiversity. In particular, a commitment to eco-offset areas, stakeholder communication and independent auditing. Yet the trend has been a year by year increase in the area of plantation forest that is FSC-certified.

Costly, yes. Personally rewarding for our people, very much so. Essential for building our green brand and to maintain access under competition into key markets, most definitely.

The ETS is also supposed to be transformational. It started enthusiastically with forestry brought in immediately and having to account for its emissions from day one.

It created disruption for the forest sector but reality dictated that we should work with officials to create an ETS that achieves society's objectives. We did that and some of us have geared up to plant the carbon forests that all major political parties say are so essential.

Only to have the government now get jelly-legs.

The National-led Government has been hugely helpful to the forest industry in many ways. Changes to heavy vehicle rules, amendments to the RMA, a refocusing of science funding, support for the use of wood in the Christchurch rebuild and



There are challenges involved in going green but, along with the market opportunities it creates, there are big personal rewards for all involved. Here pest control specialist Jono Williams checks a juvenile kiwi in Ernslaw One's Whangapoua Forest on the Coromandel.

A large proportion of New Zealand's plantation forest estate is Forest Stewardship Council certified. This requires the forest owner to monitor and actively protect the native birds, bats and reptiles in their forests by controlling possums, stoats and other predators.

backing for the Woodco Strategic Action Plan.

But these initiatives are largely to do with making business-as-usual more efficient. What is lacking is the courage to deal with the biggest challenge we're ever likely to face: How to transform our economy from having the fourth highest emissions per head in the world, to one with an emissions profile that befits our clean green reputation.

We don't have choice in this. Sooner or later we have to grasp that nettle. The only choice is whether we do it as a leader, capturing the economic benefits, or as a slow adopter driven by forces beyond our control.

Pure Advantage quotes the Stern Review's estimate that markets for low-carbon energy products are likely to be worth at least US\$500 billion per year by 2050. Also, a report commissioned by the UK Government in 2009 that puts the value of the green growth economy at NZ\$6 trillion.

These opportunities aside, there are very real risks in being slow to act.

Fuel security is a major concern of many countries that have embraced green. Yet it's rarely even discussed in New Zealand, despite the risks inherent in our size and isolation at a time of world economic turmoil.

Then there's climate change. Regardless of how it effects New Zealand, a credible response to it is crucial for the credibility of Brand New Zealand.

"No country in the world promotes its clean, green image as much as New Zealand, or is as reliant on its clean, green image for its exports and tourism," says Pure Advantage.

It is deeply disappointing that *Greening New Zealand's Growth*, released in March, made no meaningful mention of forestry whatsoever ... our third largest export sector. There's only a less than enthusiastic mention of the potential to create bio-fuels from forestry wastes.

It's time for the government to be brave. Only it can create market mechanisms that enable green entrepreneurs to compete with the big emitters.

Inevitably forestry will have a huge role to play in the transformation of New Zealand's economy. Not just with biofuels and carbon forests, but by demonstrating that higher environmental performance standards, eco-offsetting and independent certification are achievable.

Yes, there have been – and continue to be – challenges, but we are showing it can be done. If forestry can do it, why do Business New Zealand and the government have such little faith in the ability of other sectors to rise to the challenge?

MARKET DEVELOPMENT

YOU GOTTA HAVE HEART



Driving the message home: A mock-up of the NZ Wood mobile billboard on a Dunedin Carrying Company truck. Industry folk can become mobile billboards too, by wearing NZ Wood t-shirts

DESPITE A DIFFICULT MARKET AND THE EFFORTS OF COMPETITORS, PERCEPTIONS OF WOOD AS A PREFERRED BUILDING MATERIAL ARE CONTINUING TO STRENGTHEN.

Several factors are at work. There was the excellent performance of wooden structures during the Canterbury earthquakes.

There was also the work by Professor Andy Buchanan and his team at Canterbury University on the design of earthquake resilient multi-storey buildings, as showcased in the Nelson Marlborough Institute of Technology building. This was being actively promoted by NZ Wood when the earthquakes began.



NZ Wood CEO Jane Arnott

Answer to the Red Zone billboards, wood is top of mind as the Christchurch rebuild material of choice for both former forestry minister Jim Anderton and minister of primary industry David Carter.

Speaking at the NZ Institute of Forestry Conference in July, Carter said, "As Christchurch plans its "new look", I will argue passionately for the use of timber in the rebuilding programme. The redevelopment of the CBD will not be about high-rise buildings. This is about promoting the use of structural timber in the new-look city."

As the city rebuilds itself, wood-rich commercial structures are replacing many of the cement and masonry structures that have been destroyed.

But there is an opportunity for much more wood to be used.

Timing is everything and on this occasion the industry got it right. With a further prompt from NZ Wood with its Green

"We have the facts supporting the why and how of wood-rich construction of dwellings and commercial buildings. Now we have to touch the hearts of the people making the decisions," says NZ Wood chief executive Jane Arnott.

Backed by funding from all sectors of the forest and wood processing industries, NZ Wood is about to embark on a new round of promotions, targeting home makers and architects.

"The campaign will aim to make an emotional connection between wood and the consumer in a way that concrete and steel can't compete with. The sentiment is 'Put a little heart in it'. The call to action is of course, 'Build in Wood,'" says Arnott.

One of the first outings of the new campaign will be on a curtainsider truck transporting wood products around the country from early September. The truck belongs to Dunedin Carrying Company who are contracted to City Forests.

NZ Wood is planning a high profile launch for the truck's first public outing – "there is nothing like driving our message home," says Arnott.

The tractor units simply say, 'Put a little heart in it ... build in wood'. The trailers specify the range of timber applications, while highlighting the NZ Wood slogan: naturally, renewably, available today ... www.nzwood.co.nz

Other elements in the campaign include magazine and radio advertising and an updated and revamped supplier list on the NZ Wood website.

Another moving billboard concept to reinforce the truck curtainsider are T-shirts and it is hoped, if this goes ahead, there will be a positive demand from within industry to wear them.

ETS CHICKENS COMING HOME TO ROOST

THE GOVERNMENT MUST BE WISHING ITS KYOTO COMMITMENTS WOULD GO AWAY.

Having made an international commitment to reduce emissions, it then introduced an emissions trading scheme (ETS) that's now stalled. It's now faced with maintaining a moribund scheme where taxpayers continue to subsidise emitters, or with making the scheme work as intended.

The fate of New Zealand's clean-green reputation will be strongly influenced by its decisions.

Ten years ago, human-induced climate change was seen as a real and imminent threat to the planet. Both National and Labour could see that playing our part in fighting this threat would help build the clean-green New Zealand brand. Better still, by dint of our post-1990 forests sucking up carbon, New Zealand could do it at a profit.

It was a no brainer. The day when the forests were harvested and the carbon credits turned to debits was many political lifetimes away. Plenty of time to adapt the economy to a low-carbon future (Graph 1).

Now, in the fourth year of the ETS, climate change is yesterday's debate, even though the science behind the call for action is more compelling than ever.

Carbon prices, which were meant to discourage emissions and encourage forest plantings, have not worked as intended. Sure, some new forests have been planted, but the government's latest claim of an increase in planted area (*NZETS 2011 Facts and Figures*) is incorrect. New Zealand's total planted forest estate has become smaller each year since the ETS was put in place.

In December 2009 the government was confidently telling the United Nations that, "with a NZ\$25 per tonne CO₂-e price until 2013 and NZ\$50 per tonne after that, 30,000 hectares per year of new planting will occur by 2020."

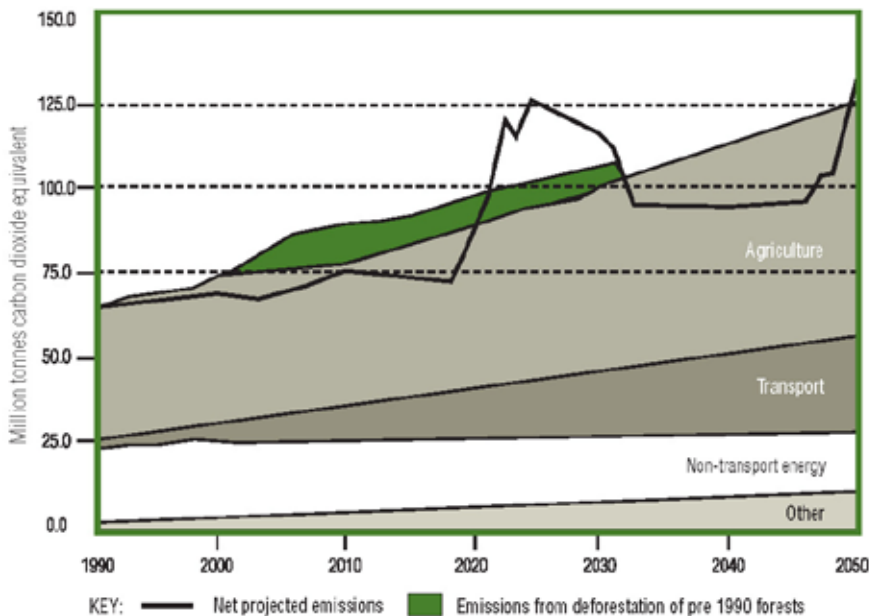
NZU prices are now around \$5 a tonne, in contrast with the \$18-20 a tonne minimum needed to encourage investment in carbon forestry.

Indeed it is now economic for many pre-1990 forest owners to do the reverse – to take the hit on carbon and convert to a more profitable land use. For many it will be better than offsetting, where you incur the costs of planting the trees elsewhere without discharging your carbon liability.

In a 2011 MAF survey, large-scale forest owners predicted they would deforest and convert 58,000 hectares by 2020 in the absence of an ETS. Under the ETS, with carbon prices around \$5/NZU they

Graph 1

NEW ZEALAND'S EMISSIONS PROFILE

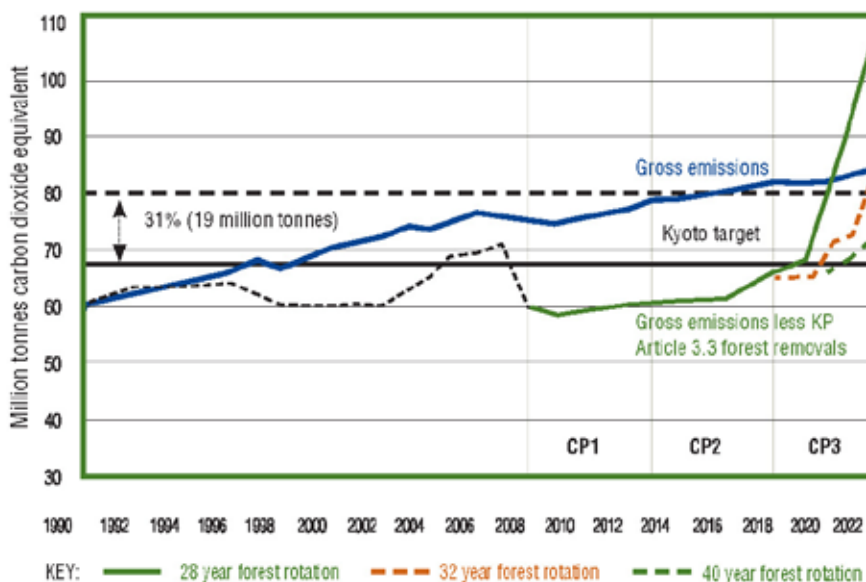


NB: Net projected emissions include post-1989 forest removals & emissions

This 2007 MfE graph predicts a rapid growth in net emissions from about 2018 as post-1990 forests are harvested. Some of those emissions have been avoided, through the imposition in 2008 of a deforestation tax on pre-1990 forests (solid green area). If carbon prices stay at current levels, deforestation is likely to resume.

Graph 2

WHAT HAPPENS FROM 2018



This graph from a 2009 NZ Government paper shows how post-1989 forests allow New Zealand to achieve a carbon surplus to 2018 despite a projected 31% increase in gross emissions. As these forests are milled, the country dramatically swings into deficit – the timing of the deficit depending on the age of forests at harvest.

In reality, New Zealand is likely to swing into deficit sooner than 2018 because the ETS has failed to encourage forest planting or to reduce domestic and industrial emissions. Aggravating the situation is the loss of the 'fast forest fix' rule.

Forest owners fear a future government might lean on forest owners to delay forest harvesting as a quick and dirty fix for an ETS that doesn't work.

predicted deforestation and conversion of about 35,000 ha.

Keeping deforestation from happening has been a major thrust of the government's ETS policy. That's because under the rules for the first Kyoto commitment period (Kyoto CP1), our plantation forests offset about 31 per cent of New Zealand's gross emissions until about 2018. After that, pine forests planted in the 1990s are harvested and forestry becomes a net emitter (Graph 2).

A recent change to the fast forest fix rule – one of the international rules that apply to forestry – means the carbon ledger will swing from positive to negative earlier than this. Instead of being liable for just the carbon stored in the trees as at present, New Zealand will be liable for all the carbon in the trees from 2013, the start of Kyoto CP2.

The FOA expects the government to shoulder this cost on behalf of forest owners who entered the ETS in good faith. But it will add to the country's steadily worsening carbon ledger unless our negotiators seek a matching adjustment to our international commitment level.

Yet there is no sign that the government intends to do anything meaningful to reduce emissions, or to take seriously the views of those who disagree. The Select Committee hearings on the latest changes to the ETS must take some sort of record for brevity.

Indeed at a time when the international price of carbon is being dragged down by world economic turmoil, the government feels the need to further protect emitters and remove the price signals needed to drive behaviour change.

"The idea that we face a European carbon price here in New Zealand is not correct," says ETS broker and *Carbon Match* commentator Lizzie Chambers. "This year, NZ emitters should be able to buy units for half the price paid by their European and Australian counterparts."

In addition that cost is halved by a taxpayer-funded two for one subsidy, an extended price cap and unrestricted access to international units to meet their domestic emission obligations.

In Europe, Korea and Australia emitters are permitted to discharge only some of their liability by buying from offshore – the rest of the reduction has to involve action at home.

Indeed Australia, where carbon is currently priced at around \$NZ30 a tonne, has now moved ahead of New Zealand in its efforts to reduce emissions.

Chambers says three types of carbon credit – CERs, ERUs, and RMUs – are either restricted or banned in emission trading schemes elsewhere, but remain 'good tender' here.

CERs and ERUs have sunk on global carbon markets to around half the value of European Union allowances. Ours is the only ETS to accept RMUs, so they sell at bargain basement prices.

If New Zealand does not do more to meet its emission reduction targets, it will lose its ability to argue its unique corner in world forums from a position of moral strength – something it has done very effectively during Kyoto CP1.

Nor is leaving Kyoto when CP1 ends in December a sensible option. While the government can quite legally do this, New Zealand would still be within the United Nations climate change framework, like Japan and Canada.

As part of the framework it would still be expected to pursue emission reductions. In contrast to Kyoto with its detailed rules, this option would place the government in an uncertain legal environment that could have implications for trade access to some markets.

The reality is that all our trading partners take climate change seriously. Indeed, clean-green credentials are becoming more rather than less important, with high-end European and North American retailers adding GHG emissions to their ethical procurement policies.

To maintain and bolster New Zealand's reputation, the FOA believes we should stay in Kyoto and adopt policies needed to make the ETS pricing mechanism actually work: including putting a limit on the inflow of foreign credits and putting in floor as well as ceiling prices for NZUs.

This need not be a savage imposition; it needs only to be at levels that industry and consumers are carrying in Europe and Australia.

One option feared by some forest owners is that, faced with the loss of the fast forest fix rule, a future government may go for a quick and dirty fix. This would involve preventing post-1989 forest owners, even those who have decided not to enter the ETS, from harvesting radiata for several years after their forests mature in the 2020s. The unjust treatment of pre-1990 forests was justified by exactly the same logic and sets a very unwelcome precedent.

Forest owners aim to make a profit from the most environmentally friendly crop in the world. If in the process we can help the nation achieve its goals, such as by participating in a properly functioning ETS, that's a plus.

But the government needs to know where it's going. Its policies need to be fair. And the long-term nature of a forest investment needs to be central to anything the government asks of us.

None of those things are true of the ETS and how it has been implemented. Now's the time to put it right.

DISTRICT COUNCILS UNFAIR RATES WILL BE CHALLENGED

The Far North, Southland and Kaipara District Councils have recently proposed road rating models based on an unfair cost allocation model developed by Morrison Low consultants.

If the models are adopted, forest owners could face rate increases as high as 500%.

In Kaipara the situation is uncertain, following the replacement of councillors by a government commissioner, but the Far North and Southland proposals are still alive.

"The FOA supports the right of councils to develop fairer rating systems, but it must be done transparently and fairly. This is definitely not the case with the Morrison Low model," says FOA chief executive David Rhodes.

"Councils that use this model should expect vigorous opposition and legal challenges from local forest owners.

"The model does not recognise the rates paid when a forest is growing, when owners make little demand on council services. It rates farms with large woodlots as farms. It makes no allowance for those forests which are accessed directly from state highways. It fails to differentiate between radiata on a 25-30 year harvest cycle and Douglas-fir on a 60 year cycle.

"The resulting increases are unjust and unaffordable. In Kaipara, it has been proposed that mining operations will pay 1.4 times the residential rate; horticultural and pastoral farming properties, 2 times; dairy farms 4 times, and forestry 14 times.

"This is absurd. Research commissioned by the Waikato District Council in 2002 showed that dairying generates 1.94 truck movements per hectare per year. Radiata forestry and beef generate 0.8 movements. Sheep farming generates the least at 0.02," says Rhodes.

MPI data shows that pipfruit yields(tonnes/ha/yr) are around double those of forestry, while kiwifruit yields are similar to forestry.



Road rates should be calculated on the basis of actual use

BIOSECURITY

DIG DEEP TO PROTECT OUR ASSETS



PSA in kiwifruit

The stuff of every primary industry's nightmares

The devastating effects of PSA bacteria on the kiwifruit industry are a stark reminder that the Ministry for Primary Industries cannot deal with all biosecurity threats on its own. Each industry must play its part in preventing and managing threats, as well as helping with funding.

To a large extent forestry is ahead of the game. Our Forest Health Surveillance system has been in place for five decades or so. However, we can hardly be complacent as we too discover new pests and continue the battle with some old ones, such as dothistroma.

"As highlighted in the FOA Science & Innovation Plan (SIP), we need to develop solutions to foliar diseases, both for radiata pine and for Douglas-fir," says FOA biosecurity chair David Balfour (see story, p7).

"Failure to do so will have serious implications for productivity, but also to the log trade, as trading partners want to import logs only if they are free of serious biosecurity threats."

In the last few years red needle cast (RNC) has loomed as the most serious foliar disease affecting NZ radiata. Thanks to considerable research funding, both from government and from FOA, scientists are now closer to understanding its cause and are working hard to develop solutions to protect existing as well as future crops.

However, current funding is barely enough for a modest research programme, which may or may not lead to successful outcomes.

"As indicated in the SIP, there are advanced technologies that could be researched to not only potentially develop robust solutions to foliar diseases, but to also increase the productivity of our forests," says Balfour.

"The FOA decision to channel \$200,000 more a year toward biosecurity research is a step in the right direction, but inevitably more money will be needed to protect the industry's core assets – our forests."

WOODCO ACTION

HIGH-TECH, THE LIKELY PATHWAY

VOLATILE RETURNS, AVERAGING OUT AT LITTLE MORE THAN THE COST OF CAPITAL, ARE THE BACK STORIES OF FOREST GROWING AND WOOD PROCESSING IN NEW ZEALAND AND CANADA.

Like us, Canada's industry is export-focused and dominated by manufacturers of traditional products struggling to make consistent profits. Like us, it has decided to break the cycle. In New Zealand, the game changer is the Woodco Strategic Action Plan (SAP). It's already ticking off milestones only months after getting the formal blessing of Woodco member associations.

In Canada, a major driver is Bio-Pathways, an initiative driven by the Forest Products Association of Canada (their Woodco) and FP Innovations (their Scion) with significant government support. In 2009, they researched the most cost-effective ways the sector could transform itself for the better.

Andrew Goodison of FP Innovations says the Bio-pathways study showed that while traditional forest products will continue to enjoy strong markets, new technologies with smaller niche markets will generate much higher returns.

Numerous viable options exist to convert forest biomass to bio-energy, bio-chemicals and bio-materials. These are best achieved by integrating their production into traditional wood processing.

By combining the old and the new, companies will experience financial returns far higher those being generated from traditional forest products. In British Columbia, the highest returns tend to be associated with new biopathway technologies (see chart). Canadian sawmills are expanding into bioenergy and pulp mills are converting into bio-refineries for production of pulp, bio-energy and bio-chemicals.

NZ exposure to the Canadian work began when Canada's Rory Gilsenan spoke at the ForestWood conference. On the back of this and driven by the SAP, Woodco has decided to carry out a similar study here.

David Balfour is the FOA representative on the steering group that will oversee research by a Scion team led by Trevor Stuthbridge. Known as *WoodScape*, it will draw heavily on the proven Bio-Pathways methodology and FP Innovations' experience.

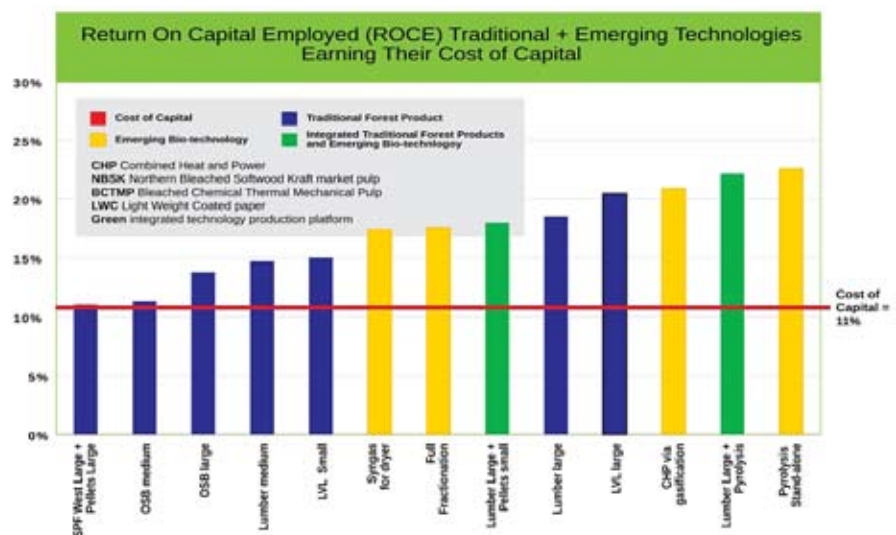
Funding comes from all major industry players, Scion, NZ Trade & Enterprise, EECA, the Bio-energy Association and the Ministry for Primary Industries.

"Promising technologies and markets will be identified and ranked. Potential synergies from working together will be explored," says Woodco chair Doug Ducker.

The findings will be presented to Woodco in February for industry discussion and in due course, integration into the Strategic Action Plan.

Woodco is looking for short, medium and long-term options. In the short-term the priority will be low capital, readily adoptable options for wood processors.

Ducker cautions that the resulting strategy won't be a carbon copy of what has been adopted by Canada. Nevertheless, some Bio-Pathways principles are already being (or will soon be) adopted by Woodco, including aligning and streamlining industry good research with the SAP and speaking as one voice to government on strategic and funding issues.



Bio-pathways - a way to higher returns (in British Columbia at least)

RESEARCH

FOCUS ON GREATER PROFITS

THE NZ FOREST OWNERS SCIENCE AND INNOVATION PLAN IS GETTING THE BIG TICK FROM ACROSS THE SECTOR.



A step change in science is needed
To increase profitability by doubling per hectare production of high quality wood

Launched by the FOA's research committee in January and peer reviewed in March, it now has the association's official stamp of approval. Indeed, on the back of the strategy, the FOA has already committed to another \$200,000 to fund additional biosecurity research.

The plan links into the Forest and Wood Products Industry Strategic Action Plan which emphasises the importance of research in boosting the sector's earnings and profitability (see *WoodScape* article, p6).

"With well-focussed research there is the potential to transform forestry from a log production business into the engine room of a market-led manufacturing industry producing high added value products for the benefit of us all," says FOA research committee chair Peter Clark.

"Our vision is to significantly increase profitability by doubling per hectare

production of high quality wood from trees with increased resistance to pests and diseases, including those not yet present in the country."

In its last term, the government increased the level of core CRI funding, so that scientists can get on with science rather than endless funding applications. Now it has made it clear that Treasury has no new money available for research and that the leverage of government to forest industry funding (up to 6:1 on some Future Forest Research programmes) is not sustainable.

Existing funds must therefore be used as efficiently as possible, with Scion and other crown research institutes (CRIs) and the universities working together and prioritising areas of research that are important to industry players. The new Science and Innovation Plan is responding to this, with its focus on those areas that have the most potential to increase the profitability of our plantation forests.

While it is clear that biofuel, biochemicals and other forest products derived from wood fibres will form an important role in a carbon constrained future, the plan identifies high-value, high volume solid wood forest products as the real drivers of forest growing profitability, both now and in the future.

The wood processing sector has developed a similar plan and has endorsed the FOA's plan as one which has the potential to deliver them with raw materials that meet their requirements.

The research priorities fall into three broad categories: improved productivity and consistency, sustainability, and operational performance. Under these umbrellas are numerous areas of research focus, including finding solutions to foliar diseases, genetic improvement, licence to operate issues and harvesting on steep hills.

While the topics may sound familiar, it is clear that a step-change in the science is required to make significant progress, particularly in increased disease resistance and productivity. The challenge is for research providers to step up and deliver.

FOA chief executive David Rhodes says it is pleasing to see and hear the plan being endorsed by government, scientists and industry players.

The plan is available for download on the FOA website.

INDUSTRY SUPPORT

CLA POLL IN OCTOBER/NOVEMBER

All going according to plan, the commodity levy referendum process will be conducted among owners of forests in October/November.

FOA senior policy analyst Glen Mackie is laying the groundwork for the poll to take place. A key milestone is setting up an incorporated society to administer and allocate the funds gathered. "Another critical milestone is creating an efficient mechanism for collecting the levy, so that hassles and costs are minimised for all concerned," he says.

"At the moment the FOA and Farm Forestry Association have about 2750 members between them, representing about 85% of the harvest. Collectively, their subscriptions and voluntary levies, which potentially benefit all 18,000 forest owners, cost little to administer.

"By going to 100% or, more realistically, 98% of the harvest, we bring all players into the room. But the costs of gathering their dues must not exceed the benefits of doing so."

The levy is not just about bringing in more financial contributors (see *Forestry Bulletin*, Autumn 2012, p2). While the funding load will be shared a little, the overwhelming majority of the levy will still be paid by existing contributors. The biggest benefit will be increased two-way communications across the industry.

Those foresters who don't belong to the FOA or FFA are not plugged into industry decision-making and information systems. They need to be, especially on critical matters like biosecurity and right-to-operate issues.

Starting September, forest owners will be the focus of a more intensive stage of the information programme. This will explain in more detail what a levy will be used for, how it will work and how they can cast their votes.

For the levy to become law, the referendum must be supported by a majority of those producers who vote – both by number and by area. The Ministry for Primary Industries monitors the process, to ensure potential levy payers are properly informed and consulted, before making a recommendation to the minister.

If a dual majority is achieved and if the minister for primary industries approves, a levy 'order' will be gazetted early in 2013 and the levy will apply from 1 July.

IN THE NEWS

IRIS FOR AUSSIES

A vital safety tool developed by the FOA has been purchased by the Australian Forest Products Association for use by their members.

Known as IRIS, or Incident Recording Information System, it is a web-based tool specifically designed for forest managers to record, benchmark and analyse their safety performance. FOA safety committee member Wayne Dempster says it is extremely valuable.

“Not only are signed up users able to benchmark their performance against the industry as a whole. They also have the opportunity to download industry data, complete incident analysis and use the information to focus their safety improvement efforts.”

Like all software, IRIS is only as good as the data that goes in. But following a major upgrade of the system four years ago nearly all major NZ forest owners are keeping it constantly updated with incident reports (both accidents and near-misses).

Likewise, technology never stands still and in coming months enhancements are planned to allow the application to take advantage of recent developments in web programming and reporting.



IRIS is no accident

FOA AGM

The 2012 Annual Meeting of the Forest Owners Association will be held at the Holiday Inn, 10 Tryon Street, Rotorua, at 3pm on Thursday 11 October.

The agenda and meeting papers will be mailed to members shortly.

COUNCILS DELAY HPMVS

The FOA is pleased with the way the NZ Transport Agency has helped open up state highways to high productivity motor vehicles (HPMVs). But it's far from happy with those local bodies that are tying up applications in red tape and cries of poverty.

HPMVs are trucks that are heavier and/or longer than the usual 40 tonne x 20 metre maximums. Special permits are needed for them to travel on specific routes.



Brian Pritchard

FOA transport committee chair Brian Pritchard says old under-spec bridges are major choke-points.

While the NZTA has been attending to these on state highways, local

bodies need to fund upgrades on their own roading networks – something some councils are loathe to do.

Even where there are no bridges or road surfaces to upgrade, some councils are unco-operative anyway, insisting on going through planning processes that can take two or more years.

“You can get a situation where a port is serviced by 150 km of HPMV-ready state highway and 5 km of city council road. This means the council is preventing the industry from accessing the efficiencies of HPMVs across the whole 155 km of the route,” Pritchard says.

He plans to talk to officials and the government to see if there is way to make difficult councils more responsive.

“In Nelson and some other districts, local councils have been very co-operative. So we know that this is not just about money. Where there is the will, there is most certainly a way.”

NZTA says the amended Vehicle Dimensions and Mass (VDM) Rule came into effect in May 2010. Since then, 782 permits have been issued for higher mass and 1094 for over-length HPMVs which have access to approximately 2900 km of state highway.

Productivity gains (for all HPMVs, not just logging trucks) were 20% for higher mass permits and a 14% for over-length permits. These gains were based on the reduction in number of journeys needed to complete the same freight task.

PRECIOUS SPECIES STUDIED

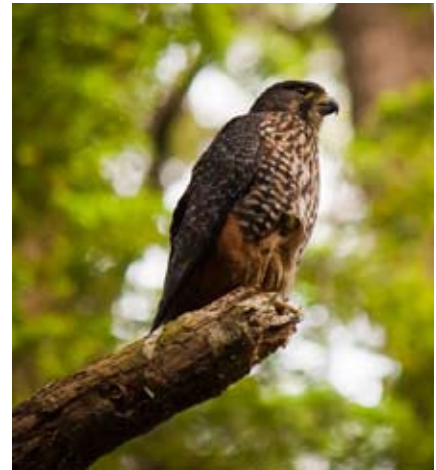


Photo: Connor Boyd, Flickr

A karearea, the NZ falcon

Chifuyu Beckett Hawksby, a Massey University PhD student, will be researching the behaviour of karearea (NZ falcon) in central North Island plantations for three years, starting this spring breeding season.

Her work, which is funded by individual forest owners, follows earlier research which shows that falcon like using cut-over plantation forest for nesting sites. Forest margins, such as coup boundaries, are preferred hunting grounds.

Most major forests are certified by the Forest Stewardship Council which requires owners to monitor and actively protect indigenous biodiversity. This in turn has resulted in forest owners funding research into how native species behave in their plantations and how they are affected by forest operations.

As a result, it is now known that our forests are important habitats for species as diverse as bats, invertebrates, reptiles and birds such as the karearea and kiwi. Vertebrate pest control in these plantations means they are playing an important role in the survival of these species.

Beckett Hawksby's work is being funded by Blakely Pacific, Hancock Forest Management, PF Olsen and Timberlands. The focus of her research is to understand the falcon's interactions (breeding, dispersal and survival) with forest operations and of particular interest to the forest industry, any effects of 1080 and herbicides.