

WOOD

Southern Africa

&

TIMBER TIMES



January 2011 Vol. 36. No. 3

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PUBLIC ANNOUNCEMENT

Due date for the submission of 2010/11 Annual Training Report And 2011/12 Workplace Skills Plan

Background

The Forest Industries Education & Training Authority (FIETA) is a statutory body established by the Skills Development Act (1998). The FIETA has been established to facilitate skills development in the forest industries sector and ensure that the skills needs are identified and addressed through a number of initiatives by the FIETA and the sector. Its mandate is to promote and facilitate skills development in the Forest Industries sector.

In carrying out this mandate the FIETA encourages all its employees to raise the skills levels of their employees by developing and submitting the Workplace Skills Plan (WSP) and Annual Training Report (ATR) to the FIETA annually.

Purpose of this Announcement

This announcement serves to inform all employers in the Forest Industries Sector of the deadline for the submission of the Annual Training Report for 1 April 2010 to 31 March 2011 and the new Workplace Skills Plan for 1 April 2011 to 31 March 2012.

The deadline period is 30 June 2011

Notes

Failure to submit the ATR and WSP may result in the forfeiture of Mandatory Grants and disqualification of applications on Discretionary grants for the relevant year.

Kindly note that the amalgamation of the CTFL, Publishing, Printing and Packaging SETA with the FIETA does not affect the submission of these reports.

Criteria

- The ATR/WSP must be signed by the organizations designated signatories
- The ATR/WSP must be submitted in the prescribed format.
- All sections of the ATR/WSP must be completed in full.

Access

The electronic templates can be downloaded from the FIETA website at: www.fieta.org.za and will also be available from the SSP department. Should you require a copy of these reports emailed to you please send your email to: Nellyk@fieta.org.za or Zwelakhem@fieta.org.za

Templates will only be available in March/April 2011.

During this amalgamation process the FIETA remains committed to its mandate and will inform you of future developments. Kindly note that the FIETA name will cease to exist on 31 March 2011 and will thereafter be known as the Fibre Processing & Manufacturing Seta (FPM).



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EDITORIAL

It's a new year and *Wood SA and Timber Times* wishes all its readers a happy and successful 2011!

Editor's notes are difficult animals to contend with. It can potentially span a vast list of topics, acts as soapbox from whence to address, debate and provide opinion. Start-of-year editorials are even more difficult!

The temptation is to speculate on what the new arrival holds install, even recap on the past year, this adding to an already crowded issue-shopping list that begs mentioning.

I'll briefly note that 2010 inflicted severe damage on all sectors of the broader timber family. The global economic slump that bit in 2009 continued into 2010. Everyone expected a recovery, some more than others, but it never somehow materialised?

2011 won't be much different either. Operative term is a SLOW recovery. The USA economy is showing some signs of recovery, that again reliant on federal support rather than actual growth.

Europe saw a disastrous close to 2010. Even the Chinese juggernaut is showing alarming signs of running out of steam as inflation there reaches through the roof.

With pundits abroad chasing yields, emerging economies are viewed as the panacea to address all wrongs. This has made South Africa's Rand surprisingly strong, this bolstering imports but impinging on exports. How this will affect SA's current positive trade balance is yet another question, the surplus the result of a boom in primary product exports, which is indicative of a slow global recovery.

So the take-home-message is – hang in there – work smart, innovate and invest wisely- the tide must turn.

Moving away from pure monetary considerations.

News coming out of Cancún, Mexico where the latest round of climate talks, aimed at finding a successor for the Kyoto Protocol ended mid-December, was that the relief was as palpable as the surf on the beach.

After the procedural nightmare of 2009's Copenhagen climate-change summit, its successor in Cancún, played out surprisingly well, achieving a fair bit of what its overhyped and acrimonious predecessor had fluffed.

Copenhagen produced a lot of ill will and an "accord" put together by only a small subset of nations.

In Cancún the ill will faded and large chunks of that accord were at last translated into the official UN process. These included \$100 billion a year for developing countries by 2020 as climate assistance; a climate fund, partly under the auspices of the World Bank, through which much of the money might flow; and a much-needed deal on the conditions under which countries may be paid to decrease the damage being done to their forests. The details were left vague but even an appearance of progress constitutes progress, of a sort.

The January 2011 edition of *Wood SA and Timber Times* is again filled with noteworthy issues of interest to the entire industry.

Notable in this regard is Gary Olsen's reappointment as Tigercat's international sales manager. Gary's brief for the past five years was district manager for Africa and special projects. His appointment not only underscores the high regard that the international forest engineering community has for locally grown talent but also reaffirms the high marks that SA's timber industry has received to date and must be maintained into the future.

With that done, let's get to work!

On the cover

Ilid Africa Trading is a recognised force in the fitting and board products market with well-known companies such as SDT, Citiwood and Chipbase offering a turnkey service to the woodworking manufacturing industry.



Etienne Nagel



Ken Nortje

Mickey Petersen • Maryke Naudé

Etienne Nagel • Yoland Lintott

January 2011 Vol. 36 No. 3

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Forest biomass for energy purposes finally on agenda

The Focus on Forest Engineering Conference takes a decided step towards putting renewable forestry biomass as energy source on the local forestry agenda.

The title of the conference, "Forest biofuels: An emerging resource?" perhaps illustrates local industry's current take on this debate.



Biomass is on the local forestry industry agenda at Focus on Forest Engineering Conference 2010

Although consensus prevails on the need to investigate biomass from a local perspective, there's also a sense of skepticism as to whether the issues discussed will really make it onto the formal agenda eventually. This is perhaps due to the lack of clearly formulated pathways generated by industry to allow for increased biomass utilisation. As a result, uncertainty prevails.

Weak policy promulgated by government to expedite the use of biomass as energy source locally might also explain this wait and see attitude.

It might as well also be that local industry, still reeling from the impact of the global recession, finds itself beleaguered by a number of issues that make taking biomass onboard currently difficult. An increasingly complicated legislative framework within which industry has to conduct business locally with hardly room to accommodate yet a further sub-sector in need of attention adds to the burden. Forestry South Africa's John Scotcher certainly alluded to this during his presentation, "Forestry biomass – Constraints in expanding forestry areas – a FSA perspective."

What is clear and having listened to the bulk of the presentations delivered, forestry biomass, classified as any plant or tree material produced by forest growth that is used to produce forestry bioenergy (the use of renewable forestry

biomass to produce energy products) from, is here to stay. Andile Mkwalo in his presentation "Forestry Biomass – Opportunities for forestry expansion – A DAFF perspective," provided the demarcation between biomass and bioenergy.

The simple logic that drives the need for increased use of biomass as a form of renewable energy, is its ability to contribute to the reduction of anthropogenic (man-made) generated greenhouse gas emissions (GHG), principally CO₂ (carbon dioxide).

The International Energy Agency (IEA) estimates that 84% of global CO₂ emissions can be traced back to the use of fossil fuels for energy purposes.

Their estimates predict further that in order to limit global temperature increases to only 2° C, the long-term concentration of greenhouse gases in the atmosphere has to be limited to 450 parts per million (ppm) of CO₂ equivalent.

Based on current trends, unless new measures are taken, global energy-related CO₂ emissions will reach 40 Gigatonnes (Gt) by 2030 (29 Gt in 2007) and continue rising thereafter, whereas climate stabilisation requires emissions to peak around 2020 and then decline.

The 1997 formulated Kyoto Protocol saw signatories commit themselves to a reduction of anthropogenic-related GHG emissions – 5,2% below 1990 levels in the commitment period 2008 to 2012.

The 2009 convened UN Climate Change Conference in Copenhagen aimed to put in place a framework that goes beyond Kyoto's 2012 first commitment period.

Setting the scene

Keynote speaker at the Focus on Forest Engineering Conference, Toronto University's Professor Tat Smith, contextualised the debate further by referring to the EIA's Energy Technology Perspectives (ETP), which includes pathways or technologies utilised to reach a 50% reduction in global energy-related CO₂ emissions by 2050.

According to the ETP scenario, biomass currently provides around 1 100 Mtoe (Million tons per oil equivalent) or 50 Exajoule (EJ) energy per year. This comprises 190 Mtoe (8 EJ)/yr of commercial heat and power and 40 Mtoe (1,7 EJ)/yr of liquid transport fuels. The ETP Blue Map, ideal scenario expects biomass use to increase to around 3 400 Mtoe

(140 EJ)/yr in 2050. This will require roughly 7 000 Mt dry biomass/yr if 50% comes from crop and forest residues and the rest from purpose grown energy crops.

Anti Asikainen, affiliated to Metla (Finnish Forest Research Institute) confirmed this reallocation of wood resources during his presentation "Global Biofuel Raw Materials and the competitiveness of woody biomass in feed stock supply".

According to Asikainen, global material and energy use of wood stood at 3,7 billion (bill.) m³/yr in 2008 – that made up of

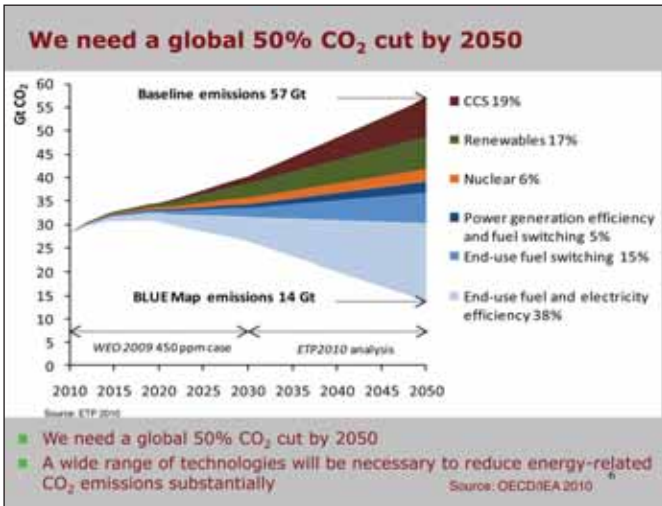
1,8 bill. m³/yr for material use and 1,9 bill. m³/yr for direct energy generation. The EU stood at 27 467 million (mill.) m³/yr cumulatively in 2008, with 379 mill. m³/yr going for material use and 88 mill. m³/yr used for direct energy production.

So the need is clear. If the emission reduction targets are to be met demand for biomass for energy purposes will spike.

Also coming out of Smith's presentation is the transition from traditional biomass to energy conversion pathways to second-generation biofuel technologies that unlock the energy components inherent in biomass.

In this regard, the ETP Blue Map scenario predicts that by 2050, lignocellulosic biomass (Wood, straw, energy crops, municipal solid waste, etc) will be processed by: Biomass upgrading (pelletisation, pyrolysis, torrefaction, etc), transesterification or hydrogenation, hydrolysis + fermentation, gasification, pyrolysis, anaerobic digestion and other biological/chemical routes.

Salient in this regard therefore for South Africa is to note the emerging conversion pathways, factor in the capital costs to acquire such capacity, trained personnel to operate such units, production and maintenance costs, the availability of feedstock, relevancy given local conditions. So too the increasing need for biomass exports to more advanced



Renewables feature large in attempts to reduce CO₂ levels

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Forest biomass for energy purposes finally on agenda

biomass for energy markets and to exploit the opportunities inherent in that.

Smith concludes that a complex network of drivers and challenges influence energy policy and bioenergy deployment. It's therefore vital to have clear policy targets and incentives in place to encourage the growth of the sector.

He also expects that the trade in woody biomass will probably grow with key opportunities and challenges.

Two cautionaries at this juncture that ought also to be raised based on Tat Smith's conclusions is the fact that southern hemisphere biomass producers should be cautious to not equate northern with southern hemisphere biomass demand. The northern hemisphere biomass market is already well developed and utilises biomass for domestic heating, combined heating and power (CHP) for industrial purposes and power generation and biofuels such as ethanol and biodiesel.

Bar a few exceptions like for instance Brazil where scale production of bioethanol coming off the sugar industry occurs, the remainder of the southern hemisphere are probably looking at first kick-starting local demand of first generation biofuels like pellets with pellet exports to developed biomass markets augmenting income. The odd sprinkling of second-generation biofuels conversion pathways will also gain foothold prior to second generation biofuels taking off fully.

A further cautionary lies in the lumping together of agricultural and forestry biomass.

Admittedly, forest biomass has a higher cellulose and lignin content and lower hemicellulose and ash content than agricultural biomass. Because of the difficulties and low ethanol yield in fermenting pretreatment hydrolysate, especially those with very high five carbon hemicellulose sugars such as xylose, forest biomass has significant advantages over agricultural biomass.

Forest biomass also has high density which significantly reduces transportation cost. It can be harvested year around which eliminates long-term storage. The close to zero ash content of forest biomass significantly reduces dead load in transportation and processing.

To meet the needs for biodiversity, forest biomass will be an important biomass feedstock supply mix in the future bio-based economy.

However, forest biomass is much more recalcitrant than agricultural biomass, meaning that it requires a greater amount of processing to make the sugar monomers available to the micro-organisms that are typically used to produce ethanol by fermentation. This translates into higher costs and

increased processing. Concluding thought in this regard is therefore that both are biomass sources, but processing is more expensive on the forestry biomass side, something that potential biofuels from biomass producers should be aware of.

Additional insights

Graham von Maltitz from the CSIR dismissed global climate imperatives as the main driver for the sudden interest in biomass. Commercial interests are certainly firing it, which in turn is linked to the demand for biofuels in Europe.



Keen interest in biomass – Morbark's Marc Custers middle left with on his right Cobus Richter from Nukor

Biomass-related activities are also seen as an additional income stream for existing timber producers while governments see it as a means to spark rural development and increase participation in the sector. Fuel security also plays a part, according to von Maltitz.

Biotech Biofuels' Jean Nielsen in his presentation, "Types of biofuels/biomass and how they are produced and applied", made a heartfelt appeal to potential local biofuel producers to not overcomplicate matters but rather to stick to tried and tested technology with local application value.

Benno Krieg provided an overview of Fesa's (Forest Engineering Southern Africa) activities and how biomass also now forms part of it.



KLF's Benno Krieg enumerates on the Forest Engineering Southern Africa's brief and how biomass fits into it

FOCUS OVERVIEW

Consequent to the scene being set on the first day, the second day saw the emphasis turning towards practical information. This also underscored the lack of clear, practical and understandable information with regards biomass, this in turn a necessity for the subsector to move forward.

Charles Swart from CT Enviro-Consultants' presentation on methods used to determine the availability of biomass consequent to for instance clear felling is the kind of information that potential producers can latch onto.

So too was Norbert Schalkx from Ponsse and Marica Kilponen from John Deere Supply Chains' contributions on mechanised harvesting inputs that can be utilised in biomass operations. Ponsse's main strength is for instance the provision of mechanised harvesting platforms that can combine mechanised with energy harvesting. Producers therefore needn't invest in two separate machines for either activity.

Together with the emphasis on practical information was a presentation from the previous day where Ciska Terblanche from CDM Africa illustrated how carbon trading can add significant additional income streams to any operation where biomass is beneficiated.

Blake Ferguson from Timber24 weighed in with an extremely interesting practical overview of trucking configurations suitable for biomass transportation. Timber24, a leading supply



John Deere's focus is on biomass bundling to make transportation easier

chain service provider to the timber industry, has embarked on an ambitious biomass relocation programme that allows for the cost-effective movement of biomass from inforest to mill and then from mill to end-user.

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Ponsse's focus is on mechanised platforms that can migrate from normal harvesting to energy harvesting without the need for major adaptations



Local timber supply chain service provider, Timber24, has made significant strides in the transportation of biomass



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Forest biomass for energy purposes finally on agenda

Brad Shuttleworth and Pierre Ackerman's take on the use of alien vegetation as a source for biomass concluded that high volumes of alien invasive species are available with harvesting of this already available via WfW teams. Factors that will have a strong bearing on the successful outcome of such projects will be the price for the resource and transport lead distances.

From a silvicultural perspective, the Institute for Commercial Forestry Research (ICFR) Steven Dovey addressed a very relevant topic on how the removal of biomass will impact on the future restocking capacity of soils.

Concluding thoughts

It's a welcome sight to see biomass's appearance on the formal South African forestry agenda. Not that it hasn't received coverage to date!

What is true though is that the conference served to focus the collective mind on the subject, which in turn creates awareness and ultimately opportunity to identify lag and instil greater cooperation between all involved.



Collective thinking – from left is Danie Scheepers (Bosbok Ontginning) together with NMMU's Jaap Steenkamp middle and Jos Louw right

Ultimately, forestry will only be able to provide collective input into the national biomass debate if it organises itself and has the facts at its disposal to influence the debate in the direction that it ought to be heading – away from outside advisors advising government on policy impacting on biomass and towards a position where the industry most intimately involved with biomass gets to have the final say.

Also clear from the presentations delivered is that significant research needs to be undertaken to understand biomass better, specifically in terms of the removal of biomass and its impact on carrying capacity.

So too the need for producers to understand the market that it is selling into. Also noticeable was the lack of input from sawmilling in this debate.

Finally, and this is perhaps the most trickiest part is to not allow the economics of the subject to distract from the ultimate objective.

Robert Pielke in his book, "The climate fix: What Scientists and Politicians won't tell you about global warming," alludes to the iron law of climate politics, which states:

"When policies focused on economic growth confront policies focused on emissions reduction, it is economic growth that will win out every time."

Admittedly, making the numbers work is important, but even more important is for forestry to capitalise on the sustainability credentials that it already has.

The timber industry is one of only a few local examples where sustainability already forms part of the monetisation process, where wealth and job opportunities are created through sustainable land use – where the iron law can be overcome in favour of a greener future.

If the industry wavers on the biomass issue simply because of economics, it will deny itself the benefits that will accrue if it entrenches its leadership in the sustainability debate through the biomass industry further.

Mechanised energy harvesting

Mechanised energy harvesting under the spotlight at Focus on Forest Engineering 2010.

Mechanised inputs utilised by local forestry in early biomass beneficiation trials are at this stage primarily focused on the chipping of biomass, whether infield, at roadside or at beneficiation end.

The mechanised input going in biomass beneficiation has, however, progressed far beyond this point in advanced biomass markets located abroad.

Whether the local biomass industry will automatically move to mechanised processes as it matures is uncertain as yet.

Key questions that will determine the local uptake of mechanised platforms in biomass or energy harvesting operations is what the cost of such platforms will be or inversely, what cost-efficiencies they provide for, if used.

The two speakers who addressed this question from company specific perspectives were Marica Kilponen, business manager for John Deere Forestry's, Forestry Bio Energy unit and Ponsse Plc's area director – Baltic States, Japan and South Africa, Norbert Schalkx.

The basic assumption coming out of both presentations was that the costs of such units can only be justified if they have the ability to work in both normal harvesting and energy harvesting operations.

Interesting also coming out of both presentations, was the product development approaches that we can possibly expect in future from companies involved in energy harvesting product development.

The basic premise of both approaches we expect developing is that mechanised platforms must have cross-over ability between harvesting and energy harvesting. The two approaches – experiential and pure – will, however, be differentiated by the degree to which it deviates from this central tenet.

Although only time will tell which approach is most valid, the experiential approach will allow for increasingly specialised platforms that are tooled towards the specific requirements of biomass harvesting. This approach also acknowledges that biomass harvesting is so new that trying to look after all its peculiarities without eventually opting for energy harvesting specific platforms is wishful thinking and is simply not possible.

Question is, will the end-user be willing to pay for increasingly sophisticated, biomass specific applications or will the efficiencies that result from that be adequate recompense for the expenses incurred?

The pure approach simply insists on the cross-over ability of mechanised platforms used in the energy harvesting arena. This ability will be increased through attachments to extend the functionality of cross-over platforms. Whether it will be able to adequately provide for all eventualities in biomass harvesting is another question.

Marica Kilponen's overview, representing the experiential approach, included references to John Deere's existing range of mechanised harvesting platforms, which, according to the company, can quite easily also duplicate in energy harvesting operations.

This included John Deere's existing range of wheeled and tracked harvesters and feller bunchers, while forwarders and skidders were also referred to and so too the range of harvester heads that allows for amongst others multi-tree-handling ability, which is very relevant if small diameter

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The John Deere JD1190E slash bundler in action

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Mechanised energy harvesting

energy timber is harvested. Weight scaling systems for the accurate assessment of volumes harvested also came under the spotlight.

The JD1190D slash bundler from John Deere represents the early manifestations of the platforms specifically designed to contend with the product specific requirements of biomass. Once baled, the slash is easily transported to wherever required. The integrity of the biomass is also guaranteed as it cannot be lost or damaged during transportation to wherever required. Accurate, real-time production figures are also available at all times. The transportation and storage of biomass is also expedited as a result of the bundlers initial inputs.



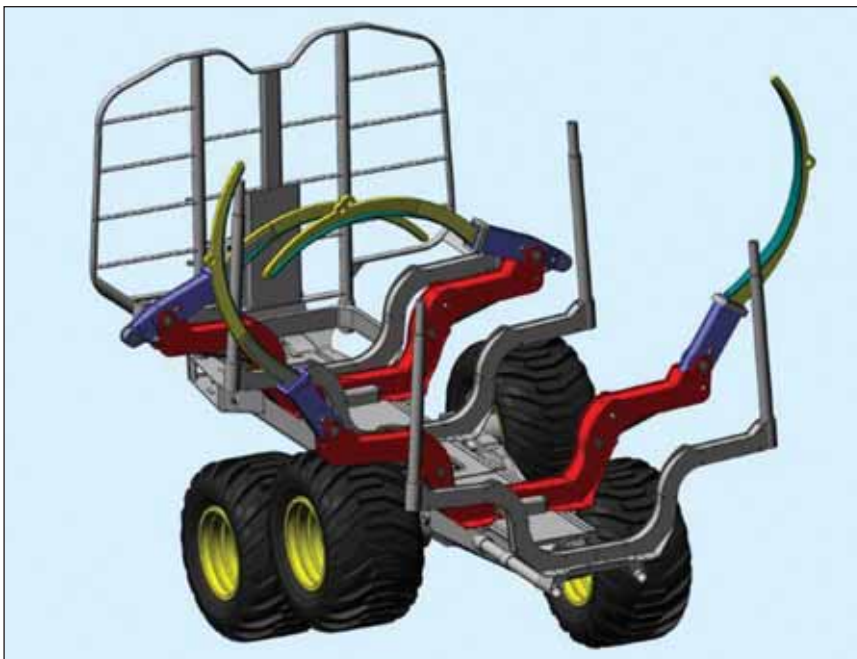
Ponsse's BuffaloDual + EH25 harvesting head doing energy harvesting service. Note the slash containing top half of the tree being loaded with the need for bundling therefore becoming obsolete



Ponsse's product range is in contrast skewed towards the pure approach. The valid proposition in this approach is that costs will eventually determine the success of biomass operations. Keep the mechanised input simple with cross-over capability intact and the costs savings will eventually secure your business.

This is underscored by the company's philosophy with regards loose residue and slash. It quite simply says that at short trucking distances (<50 km), the transport of loose residues is more competitive than the bundling of residues.

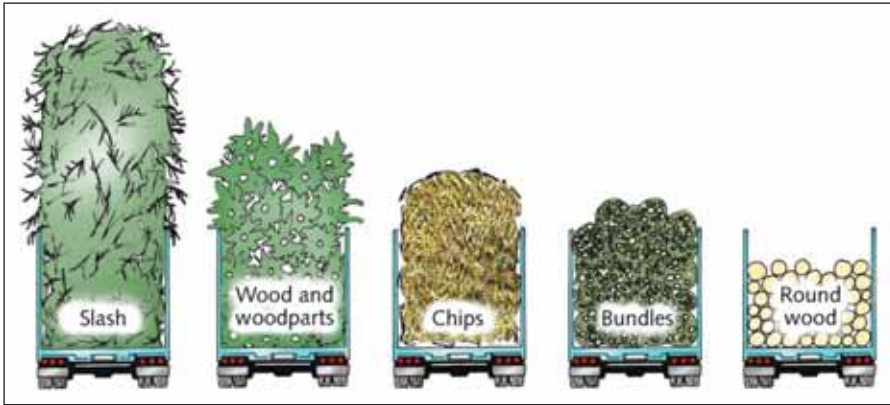
Equally so, Ponsse says, the productivity of in-forest chipping depends strongly on forwarding distance. If forwarding distance is >250 m, chipping should be done at landing.



Ponsse's (BTS) brush transportation system

This is especially so if plants where beneficiation is done do not have chipping capacity. Chips are also competitive at large distances (high truck load volume). This also makes it possible to transport chips over large distances to where the availability of forest fuels are low.

Salient in Ponsse's bioenergy harvesting technology offer is the EH25 harvesting head. The idea with the EH25 is to allow for a harvesting head that can provide for both pulp and energy products, the EH25 allowing for the top half of the tree to be lopped off for energy purposes while the bottom half goes towards pulp. The fact that the top half does not generate the slash typically associated with normal harvesting heads, makes slash bundling obsolete.



Space requirements during transportation reduced through slash bundling

specifically tooled solutions in terms of biomass harvesting is uncertain.

Whether they'd be more willing to invest in cross-over platforms is yet a further question mark.

What is clear though is that biomass will increasingly form part of normal harvesting regimes.

This makes it even more important that players who want to enter the mechanised biomass-harvesting arena make valid decisions with regards such acquisitions.

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The EH25s saw unit is replaced by a guillotine-style lopping unit that slices through the timber rather than sawing it.

This allows for a decrease in the head's weight which in turns affords it the ability to reach up to lop off the top half of the tree without becoming top-heavy.

Its multi-stem harvesting capacity is also ideally suited for the varying diameter landscape of energy timber, while its tilt geometry also makes it well suited for loading duties. The intention is therefore clear.

Provide for specific attachments that allows for specific functions while retaining cross-over ability that are typical of pure approach design parameters.

The same also applies to Ponsse's VLA or variable load area system which allows for increased loading capacity on for instance Ponsse's forwarding platforms where the bolsters are hydraulically moved apart to accommodate the increased volumes associated with slash transportation.

Ponsse's BTS (brush transportation system) also affords the ability to open clam-like grapples that replace normal bolsters, this in turn allowing for increased volumes that are held in place by the clam arms.

The eventual outcome

Only time will decide which approach provides for the most salient solution.

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Practical method to assess forestry biomass availability

A method to assess the availability of biomass and the viability of biomass projects, vital step towards providing practical tools to kick-start the local biomass industry.

What was clear from the Focus on Forest Engineering Conference was that a lot of legwork still needed to be done in terms of research to assess issues pertinent to the biomass industry. Equally so is the need for practical, easy to understand methods that can aid potential players in the segment to assess the viability of biomass projects. The upshot of increased transparency will be an immediate uptick in the number of players becoming active in the sector.

In terms of practical application value, Charlie Swart, from CT Enviro-Consultants presentation on the assessment of the availability of biomass stood out head and shoulders above the rest. What really struck a chord, was the practical, non-technical approach of the method and so too the fact that potential players now have a method to determine whether they're dealing with viable options or pie in the sky issues.

A further point is that although the research is still in its infancy and therefore pretty basic, it's indicative of the type of research required to take the biomass industry forward and realising the potential that it holds.

Three field assessment methods were presented to assess the volume of forest residue remaining after harvesting in temporary unplanted areas (TUP).

- The physical weighing of biomass in plots laid out in TUP
- Transects across TUP (Zigzag transect method)
- Allometric ratios (Desktop study)

Weighing of biomass to determine tons/ha

Decide which form of biomass is to be measured (slash or stumps or branches or all residue on site). Together with this, determine the size parameters of biomass that will be gathered, eg pieces below 200 mm in length and 120 mm in diameter are left.



Weighing biomass – Donnybrook Trials

Next step is to lay out sample plots on random basis across the site.

Weigh all the biomass within plot boundary and scale this up to determine mass per hectare.

A practical illustration of this would therefore be: 800 m² plot of harvesting slash yields 700 kg biomass. Therefore 0,88 kg/m² x 10 000 m² (1 ha) = 8 800 kg or 8,8 tons/ha of potential biomass.

Two examples of practical in-field trials using this method delivered the following results:

- Final coppice reduction stems – Plot size 9 000 m²
Duration of trial – two days
Number of workers used – 16
Weight of biomass removed – 2 937 kg
Weight of biomass/ha – 3 300 kg
Cost in R/ton (trial conducted in 2005) for removal of biomass – R229,64 + cost of extraction and haulage 10 km to weighbridge
- Second rotation coppice stumps – Plot size 10 000 m²
Duration of trial – two days
Number of workers – 10
Weight of biomass removed – 11 500 kg
Weight of biomass/ha – 11 500 kg
Cost in R/ton (2005) for removal of biomass – R72,51/ton + cost of extraction and haulage 10 km to weighbridge

Pros and cons of manual weighing method

Advantages:

- Accurate results
- Disadvantages:
- Plot location critical but difficult to obtain objectively
 - Time consuming
 - Very expensive
 - Unsuitable for macro scale estimations



Second rotation coppice stumps

Zigzag Transects

Also known as Line Intersect Sampling (LIS) whereby the volume of wood per unit area is estimated based on the diameter of the logs within a predetermined set of length and diameter parameters that are intersected by line of known length.

This method was found to be accurate and precise when compared with other methods of waste sampling and was only system to show no significant bias (LIRO, New Zealand, Project Report 60, 1996).

One forestry company adapted this method whereby 20 transects of 20 m length are laid out at 45° to each other at random throughout compartment to be measured (parameters = minimum utilisable log size).

One can adapt parameters for biomass estimations, eg: diameter >30 mm, length >300 mm.

All material equal or exceeding these parameters are recorded on a field sheet with only the diameter at the point of line intersect being recorded.

The sum of the diameters are squared and divided by factor (20,273) to obtain m³/plot.

An average across 20 plots ultimately provides for the biomass available in m³/ha.



Accumulation of biomass on roadside after high lead operation (not suitable for Zigzag (Lis) transect method)

Advantages and disadvantages of Zigzag LIS sampling

Advantages:

- Relatively accurate (if state of TUP is suitable)
- Cheaper and less time consuming than manual weighing

Disadvantages:

- Element of subjectivity with transect layouts
- Not suitable for tree length harvesting with accumulations of biomass on roadside

Allometric ratios

The method was also reported on in the Institute for Commercial Forestry Research's (ICFR) Bulletin 13/2005.

It can be used to convert standing m³ (original crop) into:

- Oven-dry stem wood in tons/ha (x m³ by 0,45)*
- Oven dry bark in tons/ha (x stem wood tons/ha by 0,12)*
- Oven dry branches in tons/ha (x stem wood tons/ha by 0,12)*
- Factor for *E.grandis*

Advantages and disadvantages of allometric ratios

Advantages:

- Quick and cheap to implement
- Scientific basis for analysis
- Suitable for macro studies on desktop basis
- Greater subjectivity than other methods.

Disadvantages:

- Only gives an indication of potential biomass

Species	Utilisable Timber Volume (m ³ /ha)	Oven Dry Stem Wood (t/ha)	Oven Dry Bark (t/ha)	Oven Dry Branches (t/ha)	POTENTIAL BIOMASS
<i>A. merrillii</i>	150	98.1	12.753	25.506	25.506
<i>E. grandis</i>	150	80.4	12.864	9.648	9.648
<i>E. grandis</i>	150	67.5	8.1	8.1	8.1
<i>E. microcarpa</i>	150	82.65	12.3975	17.3565	17.3565
<i>E. nitens</i>	150	78.9	9.468	26.826	26.826
<i>P. radiata</i>	150	87.15	8.715	18.3015	18.3015
<i>P. pinaster</i>	150	58.05	5.2245	15.093	15.093

Notes:
 * Utilisable timber volume = ave m³/tree * 5pha.
 Biomass = branches in oven dry tons/ha (no stem material > 3.0 cm dia), no bark or leaves.

Ratios to convert timber volume to dry mass (ICFR Bulletin Series: No 13/2005)

Common denominator of three biomass estimation methods

All three methods only provide for an estimate of the POTENTIAL biomass available.

It does not provide information on the actual available biomass as a tangible product or raw material from the forest.

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Clean development mechanism aids local biomass industry

Amongst the local incentives used to spur investment in biomass-related activities is the Clean Development Mechanism (CDM), one of three cap and trade mechanisms under the Kyoto Protocol that are only available to developing countries.

The presentation by CDM Africa director Ciska Terblanche was again a practical overview of the instruments available to potential biomass investors to recoup some of the costs incurred to get biomass projects off the ground and increase the use of biomass as a fuel.



Ciska Terblanche from CDM Africa

Four basic instruments exist – tradable green certificates (Trec), Renewable Energy Feed-in Tariffs (Refit), fiscal and financial incentives such as tax and import tax rebates and VAT claims and then finally the CDM mechanism.

The Trec system is still at a development stage. It involves the issuing of certificate to a power producer for every kilowatt hour (kWh) of electricity generated from renewable energy (RE). The certificates are tradable, non-tangible energy commodities that can be sold, traded or bartered by the holder. The buyer of the certificate can in turn have a legitimate claim that renewable energy was purchased.

Albeit a voluntary system, legislation provides the framework to switch to a mandatory system, ie industry will have a RE electricity use target. The ultimate aim is for RE to constitute 15% of the energy mix available to the end-user.

A fair amount Refit has been written on Refit to date. The mechanism again serves to encourage investment in biomass-related projects while it also provides the investor with an additional income stream that can serve to recoup costs incurred to obtain the generation capacity.

Under Refit, the power producer is paid a fixed feed-in tariff for each kWh produced from a renewable energy source. At this point, the biomass rate is R1,18 per kWh.

The CDM mechanism aims to direct private sector investment into emissions-reduction projects in developing countries while promoting sustainable development in these countries. In return, the industrialised countries investing in projects will receive credits against their Kyoto targets. Kyoto Parties with emission targets for 2008 to 2012 are eligible to apply certified emission reduction units from CDM-funded emission reductions towards meeting their target in and after 2000. A basic example of such a project would involve an investor from a developed country investing in a project in a

developing country that will see a coal driven boiler being transformed to a biomass driven boiler. The CO₂ emission reductions resulting from this conversion is then traded. One ton of CO₂ = 1 credit. The current price for 1 credit is roughly €12. The mechanism therefore serves to encourage investment by developed nations in the economies of developing nations with the developing nation earning an income off CO₂ reductions established while the developed nation

investor can use the carbon credits purchased to offset the CO₂ released by their industrial processes and therefore adhere to the requirements of the Kyoto Protocol.

There are currently some 2 400 registered CDM projects in 51 countries with another 1 900 in the pipeline. Of the 2 400 projects, more than 900 are in China, >500 projects in India and > 170 projects in Brazil/Registered projects are expected to generate 374 million certified emission reductions (CERS) p.a. and > 1,8 billion CERs by end 2010.

Conclusion

Local investors in biomass projects should be aware of the incentives provided to encourage the use of renewable energy.

A brief overview of the financial incentives already in place reveals the following:

- Refit: Sell electricity from renewable energy to Eskom: R1,18 per kWh
- TREC: Sell electricity from renewable energy to an electricity consumer
- CDM: Sell CO₂ reductions to developed countries – €12 per ton CO₂

How this translates into financial benefits, is revealed in the following:

The fuel switch from coal to biomass to produce electricity (condensing turbine): 1 ton biomass (wet) = 0,56 MWh = R80 (CDM) + R660 (REFIT)

One ton of wet biomass can therefore potentially provide for an additional R740 over and above the income generated from whatever timber product is sold into the marketplace.

Makes a lot of sense.

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Forest genetics gains from biotechnology

High productivity forests are required to meet the projected increasing global demand for wood fibre.

Genetic improvement of Radiata pine has been delivered by traditional open pollinated or controlled pollination and clonal breeding programmes. Potentially, as outlined by Greg Mann, general manager, Arborgen Australasia, in the just completed ForestTECH 2010 series, significant additional gains could be delivered by genetically modifying the enhanced germplasm produced by these non-GM methods.

GM crops continue to remain the target of strong opposition on environmental and health grounds, despite the conclusions of more than two decades of environmental biosafety research. GM crops are increasingly seen in the pattern of International Trade and are accepted by importing countries. While 25 countries planted GM crops in 2009, 57 countries approved imports.

The first GM trees were produced 24 years ago and the first field tests were initiated in 1988. China was the first country to release GM trees (Populus hybrids for insect resistance) for commercial planting in 2002. There have now been well over 700 field tests worldwide of GM trees, both forest and fruit. Over 35 forest tree species including various Populus species and hybrids, various Eucalyptus species and hybrids, pines including Loblolly and Radiata, spruce and birch.

The GM tests that have been tested in the field include; faster growth, higher yield, reduced and/or modified lignin (mainly for improved pulping), herbicide tolerance, insect resistance ... At the moment, field testing of GM trees is limited in New Zealand to Scion's research, primarily on the environmental impacts of GM Radiata and field tests of GM Radiata have also been reported for Chile.

Details of the genetic gains that can be made through adoption of biotechnology in this part of the world has been part of the ForestTECH 2010 series. Limited copies of the full proceedings can still be ordered through the Post Event details of the event website, www.foresttechevents.com. As outlined by Greg Mann, biotech plantation forestry is being pursued in some of the major forestry countries in the world, namely China, the US and Brazil. If Australasia doesn't follow this path, there is a real danger that our competitiveness will be eroded.

Source: Friday Offcuts



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Wood SA *Sirex* update

The Sirex wood wasp, Sirex noctilio, continues to cause much damage to South African pine plantations, and the ongoing threat associated with this pest, has necessitated an increased pest and disease awareness in the pine growing timber industry.

The response by the industry, through Forestry South Africa (FSA), and government, specifically the Department of Agriculture, Forestry and Fisheries (DAFF), has provided funding for research and operation biological control to control the pest. The South African Sirex Control Programme through the efforts of a Steering Committee and an Operational Committee, are active in the management of the threat associated with the Sirex wood wasp. The success of the Control Programme can be shown in several ways.

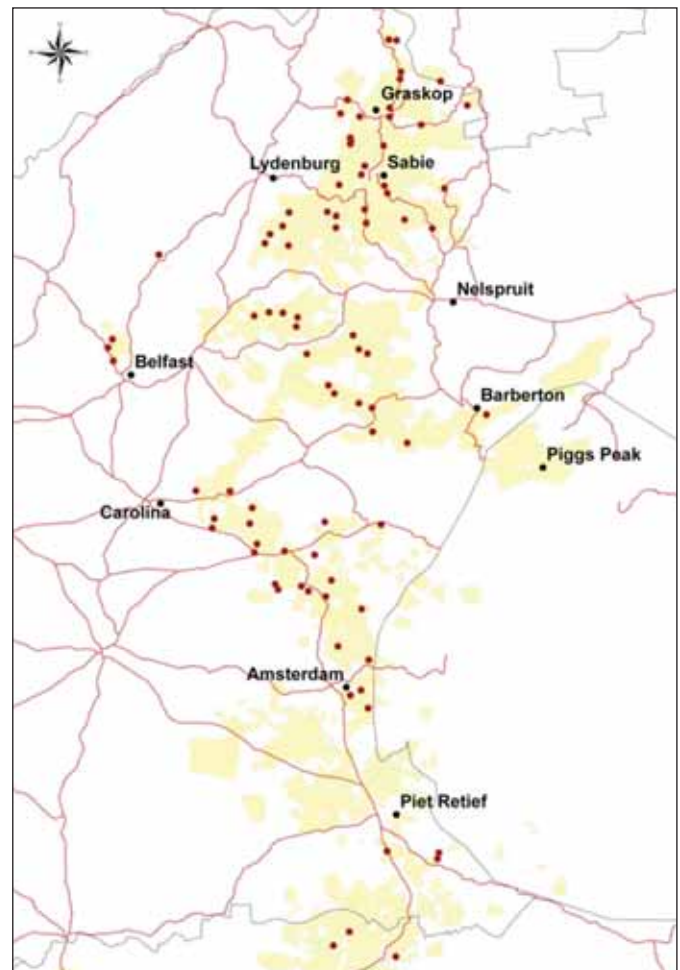
New outbreaks

Monitoring *Sirex* using panel traps provides information on its spread through South Africa, and has allowed the programme to focus its efforts particularly on the newly infested areas. In areas where traps containing female *Sirex* wasps were identified for the first time, contractors were brought in to assess the number of trees affected, and inoculations with the biological control agent, *Deladenus siricidicola* (a nematode that disrupts the egg production in the *Sirex* female) were effected.

In previous years, traps were placed in areas of mature pine, preferably *P. patula*, and especially in stands of pulpwood or unthinned sawtimber, as it was noted that these regimes place *P. patula* trees under stress, which attracts the *Sirex* females. In an effort to refine trap placement and to better establish the high risk areas, this year sites have been selected which receive good late summer rainfall and high evapo-transpiration in winter, as research suggests that these key factors also promote stress in pine trees. This initial work was carried out and published within the last few years by Dr Riyad Ismail (Sappi).

At the ICFR (Institute for Commercial Forestry Research), Dr Ilaria Germishuizen, utilising GIS technology, has been able to overlay the stress factors mentioned above on a landuse database for the country, to determine the specific sites that would show a higher risk of *Sirex* attack.

These sites have been verified with forestry companies who provided information on age and species. From this process, 94 trap sites were identified between Piet Retief and Louis Trichardt. Three traps per site were erected and inspected weekly. To date, 18 sites have trapped *Sirex* females indicating new territories that have been invaded by the wasps. The traps are set at the beginning of the flight season, usually the last week of October, through to



Map showing the distribution of traps

20 December, being the end of the flight season in the summer rainfall area.

All these newly affected areas will be surveyed with the cooperation of the landowners, and decisions will be made about future inoculations of nematodes into these areas.

Current range of *Sirex*

Sirex has moved through the Cape, Eastern Cape and KwaZulu-Natal, and is now in Mpumalanga with the Belfast to Nelspruit road having been crossed in 2009.

The wasp moved through the area from Piet Retief to Carolina in isolated points in 2009 and has invaded more farms in this area.



Measuring the effectiveness of biocontrol

Before the flight season, *Sirex*-infested timber is collected and placed in cages at an emergence depot. The timber represents a sample taken from inoculated and uninoculated *Sirex*-infested timber, in order to measure the parasitism levels achieved by inoculation with nematodes. Levels of parasitism in wasps emerging from uninoculated timber indicate the success of the *Sirex* wasp to spread the nematodes naturally. Wasps are collected from the cages daily, counted, and the sex determined. These wasps are then sampled and sent to FABI for dissection to determine how many are affected by the nematodes (parasitism). This also provides an indication of the sex ratio and size of the population when the number of wasps per log is compared to other regions.

The industry currently has an emergence depot on Mondi Shanduka Newsprint's Linwood farm near Howick in the Natal Midlands, which has been operational since 2007. This year, two new depots have been set up, one at Vryheid in Northern KwaZulu-Natal, and the other outside George on Mountain to Ocean (MTO) property. The depot at George has not started to produce wasps (as of the beginning of December), and this is due to the different *Sirex* emergence period experienced in the Cape.

Some differences are emerging with respect to data collected from the emergence depots, and these will be further investigated. Parasitism levels are encouraging with Linwood achieving levels of around 50%.

Biocontrol using the parasitoid wasp, *Ibalia*

Ibalia leucospoides, a parasitoid wasp also used in the biological control of *Sirex*, was released soon after *Sirex* was found in the Cape. In previous years Insectaria at George, Tokai and Jonkersberg have been used to capture these wasps and distribute them to KwaZulu-Natal. Some *Ibalia* were released in KwaZulu-Natal and Eastern Cape in 2007 and 2008. This release was successful and *Ibalia* are now established in KwaZulu-Natal and the Eastern Cape. Insectaria containing *Sirex*-infested timber have collected *Ibalia* in KwaZulu-Natal this year, and these wasps are being taken northwards for release in the more recent established *Sirex* areas.

The Insectaria at Tokai, Jonkersberg and George are operational again this year. Some of the *Ibalia* from the Cape will be sent to FABI into a rearing programme to raise wasps for release in KwaZulu-Natal. The wasps cannot be moved from the Cape directly as the emergence period in the Cape is not synchronised with KwaZulu-Natal and releasing the *Ibalia* wasps too late in the *Sirex* egg hatching season would be fatal for the *Ibalia*.

Monitoring *Sirex* population levels

Monitoring *Sirex* population levels has taken place annually to determine trends in population numbers. The impact of the *Sirex* population is measured in terms of the number of trees

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International appointment validates SA forest engineering expertise

Gary Olsen's appointment as Tigercat's international sales manager underscores the high regard for SA forest engineering expertise abroad.



Gary Olsen, appointed as Tigercat's international sales manager

Tigercat has announced that it has appointed, or more accurately, reappointed Gary Olsen to the position of international sales manager.

Gary has spent the past five years working as Tigercat district manager for Africa and special projects. Gary will be dividing his time between Canada, South Africa and Tigercat's various international markets. "Along with his dedicated sales and district manager team, Gary looks forward to taking on new challenges together with the aim to continue growth in international business for Tigercat," the company announced. Jeff Cave replaces Gary as district manager for Southern Africa. Jeff comes from a solid technical background having worked for the South African Tigercat dealer Afrequip for nearly four years. Jeff joined Tigercat three years ago in the role of product support representative for Tigercat and consequently is very familiar with the South African customer base and its requirements.

Rossana Constant has been appointed international sales administrator. Rossana has performed various roles at Tigercat since joining in 2005. Most recently she has worked closely with Andres Muñoz, district manager for South America to help develop new markets and support new and existing dealers in the South American market. Hailing from Chile, Rossana is multi-lingual with proficiency in Spanish, Portuguese, English and French. Her role will now be broadened beyond South America and she will be working with the full network of international dealers, interfacing the daily product demands of the marketplace with Tigercat's production capacity.

Adding to the flood of congratulations reaching the new appointees, Afrequip, Tigercat's representative in South Africa said that it wished all newly appointed Tigercat staff members the best with their future endeavours. In related news, Afrequip also announced that it has moved into its new, Pietermaritzburg-based head office, the move set to deliver even better service to the industry, Afrequip said.

The office is located at:
18A Shortt Retreat, Mkodeni, Pietermaritzburg.
Contact details for the office are:
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Any further enquiries can be directed to Flip Breytenbach on cell number 072 708 9091 or flip@afrequip.co.za

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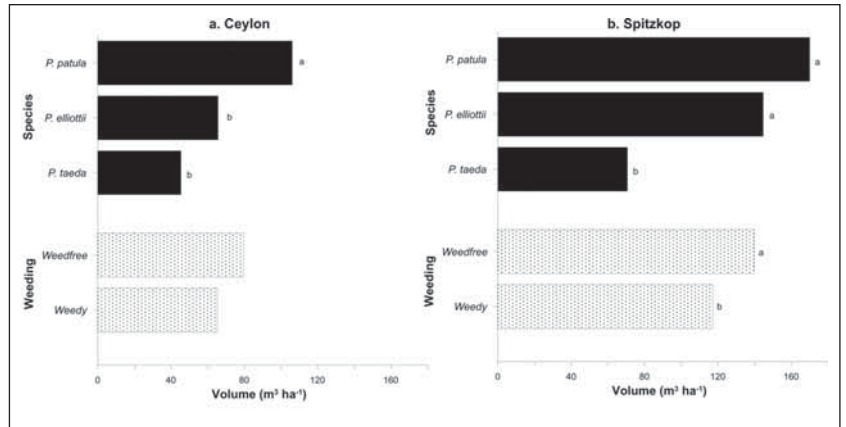
ICFR Mpumalanga regional interest group field day held

The event, held at Komatiland's Brooklands plantation was well attended by industry. This is the first part of the overview, which will be continued in the February 2011 issue.

Kicking off proceedings was Keith Little who looked at the interaction between three pine species and weed competition on two contrasting sites in Mpumalanga. He says, "The Mpumalanga province has long been a key region for the growth of pines which currently amounts for 48,1% of South Africa's softwood production.

"The diversity in terms of physiography, climate and underlying geology means that different pine species are matched to appropriate sites, of which *pinus patula* is by far the most widely planted with an approximate area of 61%, with *P.elliottii* and *P.taeda* contributing 29,5% and 4,4% respectively. In general, the most appropriate pine species for a site is determined primarily by temperature regime when a minimum level of water is supplied, with *P.patula* best at higher altitudes and *P.elliottii* at lower altitudes.

"The presence of competing vegetation during re-establishment can have a major impact on tree performance in terms of growth, survival and variability, particularly for eucalyptus grown on a short, pulpwood rotation where any negative effects from early competition are likely to result in a significant reduction in yield at harvest. Research conducted in the early 1990s also indicated similar, early negative impacts on pine performance. However, due to the longer rotation



Estimated volume (m³ ha) at 11,5 years for the main factor of pine species and weeding in two trials in Mpumalanga

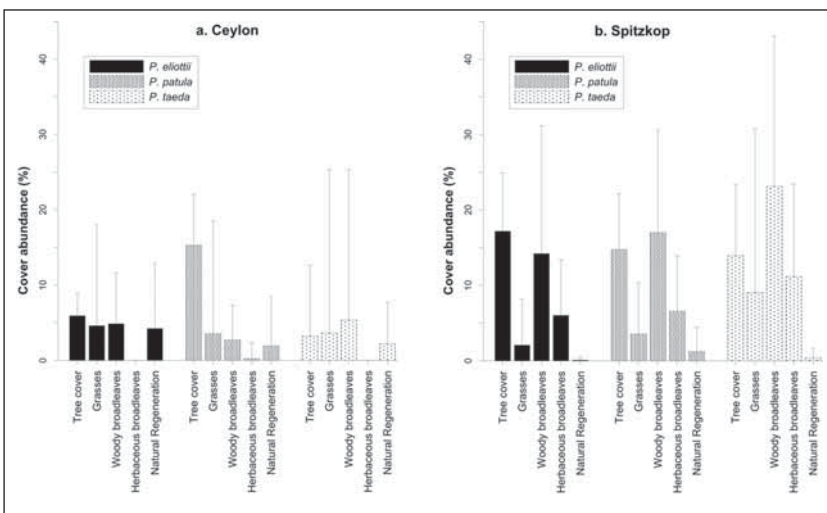
length of pines, questions were raised as to whether any negative impacts from competition would be carried through to felling. In addition, there was a general lack of information related to the susceptibility/sensitivity, if any, of the pine species specifically grown in Mpumalanga to weed competition. Research also conducted at this time at Usutu, Swaziland, indicated that the most vigorous growth occurred on lower elevation sites."

To improve understanding on these aspects, three trials incorporating three pine species ie *P.patula*, *P.elliottii* and *P.taeda* were initiated in 1995 on contrasting sites in

Mpumalanga based on altitudinal gradient, low, mid and high in combination with two weeding scenarios, ie weedy and weed free. Unfortunately, no long-term data could be obtained from these trials at the low altitude trial was abandoned due to an early, unscheduled weeding with the remaining two lost through wild-fire in 2007.

Izette Greyling of TPCP looked at pest affecting pines.

She says, "Pinus species consist of 50% of planted exotic forestry species in South Africa, and are thus an important component of the country's forestry industry and a major contributor to the economy. A significant threat to the continued use of pinus species in South Africa is the losses incurred by insect pests. Since the introduction of pine to South Africa in



Main percentage vegetation cover at two years two months after planting in two pine species x weeding interaction trials in Mpumalanga. Bars indicate standard deviation



Izette Greyling of TPCP looked at pest affecting pine

the late 17th century, many insect pests native to South Africa have adapted to feed on pine. Furthermore, various insects which feed on pine in the tree's native range have been accidentally introduced into South Africa. The rate of introduction on these non-native insects has increased over time due to the increase international trade and transport.

"Insect pests of pine currently in South Africa can be divided into four major groups namely wood and bark borers; defoliators or foliage feeders; sap-suckers and pests of establishment. Wood and bark borers include the *Sirex* woodwasp, the deodar weevil and a number of bark and ambrosia beetles. These insects use the inside of bark and/or the wood to feed on and to make a home. Damage by these insects includes under bark girdling, extensive tunnelling which weakens the tree and to the introduction of symbiotic fungi that weaken or kill the host. Defoliators include various species of beetle and the larvae of moths or caterpillars.

"Although defoliators seldom cause tree death, heavy infestations can result in stunted growth and in severe cases the death of the tree. Various insects attack pine in its establishment phase, ie transplants. These include whitegrub, termites, cutworm, grasshoppers and crickets. These insects can cause severe losses, resulting in stands needing to be replanted.

"There are different methods used to control forestry insect pests. These include biological control, chemical control, silvicultural control, breeding and selecting for resistance or a combination of these methods. The control strategy used will depend on the particular insect and environment involved. Effective monitoring of forestry pests is an important factor in achieving

successful control. Monitoring tools include traps, surveys and importantly the involvement of foresters and farmer who are often the first to encounter pest infestations."

The overview of Forest Engineering South Africa (Fesa) including current research projects formed part of Dennis Lawrie's talk which also included a broad outline of York Timbers' 2010 fire experience.

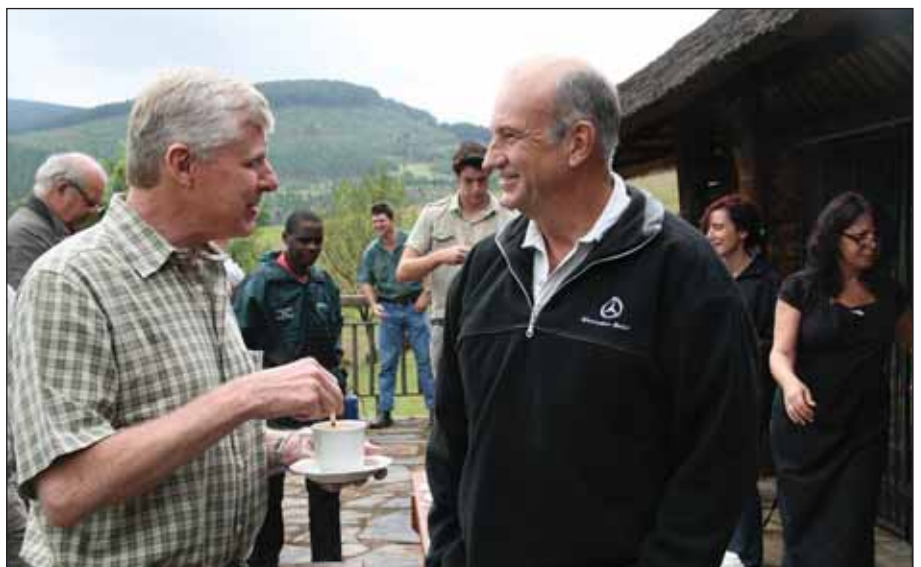
With regards to Fesa Lawrie had the following to say, "Over the past five years, Fesa has initiated a number of projects which have been successfully taken up by industry. These include the development and production of handbooks and manuals as well as research and development projects, focusing on pulpwood transport optimisation, harvesting, costing models, forest technical surveys and road transport management system. All of these have benefited key stakeholders in the South African Forest Industry, including large forestry firms, private growers and contractors. Fesa has also been effective in informing government on relevant pricing policy and in supporting training and certification bodies.

During 2009, Fesa relaunched itself and it was decided to retain the Fesa name as one recognised locally and internationally. A new steering committee for Fesa has been set up with Dr Dirk Laengin as chairman. Fesa has also developed a new logo and set up a website hosted on the ICFR website www.icfr.ukzn/collaboration/Fesa/.

The programme had a number of broad objectives. These are:

- To conduct forest engineering research and development aimed at improving the productivity and cost-effectiveness of the South African forest industry. A key objective is the integration of forest engineering and silviculture
- To promote and improve cooperation in forest engineering research and development
- To create awareness and disseminate relevant information and
- To raise the skills and increase efficiencies by promoting and supporting appropriate training and education

to page 23 →



Dave Everard of Sappi with Dennis Lawrie of York

Bursary windfall for forestry students

The declaration of 2011 as International Year of Forests provides windfall for local forestry students.

The United Nations has declared 2011 as the International Year of Forests. To celebrate this, the South African Institute of Forestry (SAIF) and the William C. Teie bursary fund will be awarding a R20 000 bursary to a first year student studying a dedicated forestry course (National Diploma Forestry or B.Sc. Forestry).

William Teie is the author of the popular "Fire Manager's Handbook on Veld and Forest Fires," which is edited by Tiaan Pool. He has kindly donated all South African royalties from the handbook to a bursary fund for South African forestry students. The first bursary will be awarded to a first year student studying for a National Diploma in Forestry in 2011, and to a first year student studying a B.Sc. Forestry in 2012. The bursary will alternate each year.

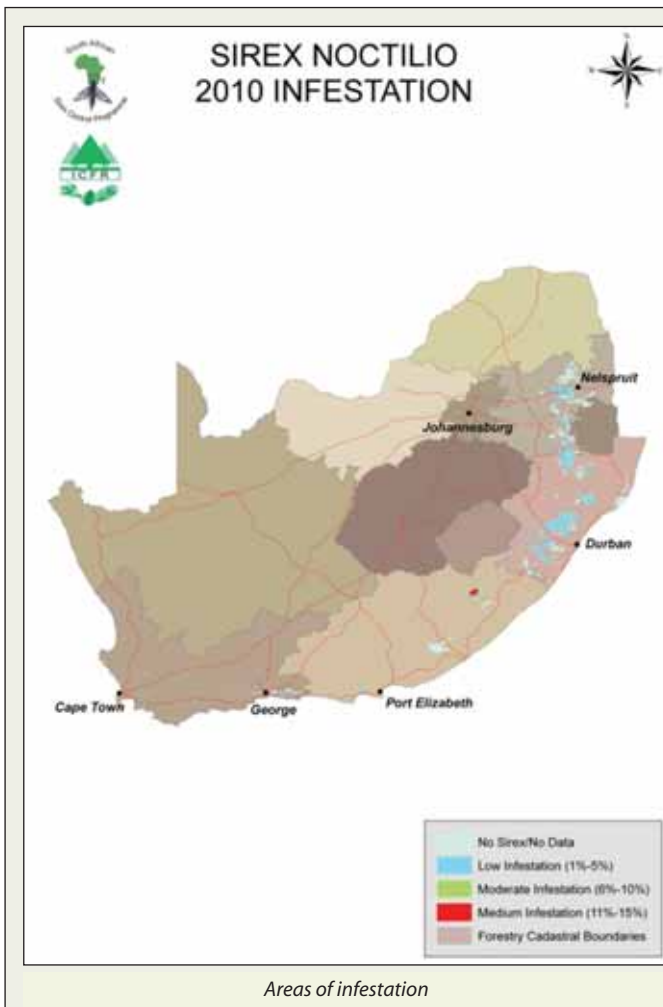
Two equal payments of R10 000 will be made into the student's study account at the beginning of the first and second semesters. If student academic progress is unsatisfactory after the first semester (more than one subject failed), the second payment will be forfeited.

The requirements for the 2011 bursary are as follows:

- Applicants must be South African citizens (and provide proof).
- Applicants must prove that they have registered at one of the South African academic institutions offering a National Diploma in Forestry.
- Grade 12 results must accompany the application. The main consideration for awarding the bursary will be previous academic performance. However, in the instance of similar academic performance, previously disadvantaged candidates will take preference.
- A short motivation (maximum one page) must be submitted as to why the student is deserving of the bursary.
- Students who have existing bursaries may not apply. The bursary is meant for students who hold no other bursaries.
- The final date for acceptance of applications is 15 February 2011.
- Applications must be addressed to Corine Viljoen at saif@mweb.co.za.

Further information can be obtained from Corine on 082 5238733 or Andrew McEwan at 083 6765668.

EN



From page 17:

Wood SA Sirex Update

dying, due to the combined impact of *Amylostereum areolatum* fungus and phytotoxic mucus deposited with the egg by the female *Sirex* wasp. The survey calculates the number of trees dying, and this is expressed as a percentage of healthy trees. Compartment data is then expressed at a farm level which includes aspects such as age class and species. This is done across South Africa and maps are produced indicating levels of *Sirex* damage. Classes that have been used are, 0% where *Sirex* is not present at all, 1% to 5%, expressed as low, and where 4% to 5% which indicates the necessity for inoculation of nematodes, *Beddingia siricidicola*. The 6% to 10% category, medium infestation requires severe attention. In 11% to 15% category harvesting options should be considered.

The following map indicates the 2010 *Sirex* monitoring results.

Currently, the best measures for controlling the *Sirex* wasp remain an integrated approach, using biological control with both the nematode and the *Ibalia parasitoid* wasps, combined with good silviculture including site species matching and thinning regimes, to reduce stress,

For more information, contact Philip Croft at philip.croft@icfr.ukzn.ac.za or visit www.icfr.ukzn.ac.za/collaboration/sirex/

MN

From page 21:

ICFR Mpumalanga regional interest group field day held

Projects are funded collectively through a grant from Forestry South Africa. In most cases, the private sector funding is leveraged through matching THRIP funding from the National Research Foundation. The projects are closely managed through an industry steering committee.

In 2009, four research projects were commissioned and completed:

- South African Harvesting and Transport Costing Model (Stellenbosch)
- Cut-to-length versus tree-length harvesting in eucalypts (NMMU)
- Pine sawtimber utilisation (NMMU)
- Evaluation of mechanised harvesting systems in sawlog operations in South Africa (Stellenbosch)

In 2009, as part of its communication and awareness initiative, Fesa also took the decision to place many of its publications in the public domain to



Small informal chats during the seminar



Colin Dryer of the ICFR

- The development of a standard work study protocol and manual for the South African industry
- The development of a decision support model for using forest residue as a source of bioenergy in southern Africa
- Development of guideline for steep slope, semi and fully mechanised harvesting operations in southern Africa. MN



Ben Bothma of the RLF left with Dennis Lawrie

ensure that they are easily accessible and available to a wide variety of stakeholders.

For details of these visit <http://icfr.ukzn.ac.za/collaboration/Fesa>.

A number of projects have also been identified as a high priority for the industry.



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18103 Wood 11/2010

Largest range of used forestry equipment in the southern hemisphere

AFM-Pacific (Pty) Limited is a specialist Forestry Equipment Dealer based in Melbourne, Australia.

The company's operations started in the mid-1980s in Mt Gambier South Australia (the current site for the Austimber Expos) and in the early 1990s the company relocated to a more central base in Melbourne Victoria.

Since that time and in response to market demand the company's activities have included the sale and service of new AFM tree harvesters – Trelan and Morbark Whole Tree Chippers – BEL Cable Logging Systems and more recently Ensign and Rosin Forestry Attachments.

A business association with these suppliers continues today.

"Used forestry equipment sales have always been a major part of the company's specialist expertise," said Kevin Drum the principal of AFM-Pacific. He went on to say "It is with much pride we look back on the past 25 years of what we consider to be a unique and professional reputation in this regard. Based on our experience quite often customers seek our opinion on the correct type or make/model of suitable machines for their specific operations."

AFM-Pacific's customers are many and varied and located across the entire continent of Australia and New Zealand; they include logging contractors, forest owners, wood product exporters and sawmillers. Internationally a reliable network of

professional suppliers (customers) is being continually developed as we move forward into the 21st century – for this is now a global forest industry!

Increasingly tougher quarantine conditions and security issues have put a major emphasis on the cleaning preparation and packaging of used equipment for international shipment – to this Drum comments: "With the assistance of the respective authorities' advice and cooperation we have never had a shipment rejected on any grounds – and believe me that is a significant achievement! The rigid cleaning standards now required for the overseas movement of used machinery is 'as new' and with our considerable experience we are more than able to accommodate these requirements."

"We see southern Africa as a very important emerging market for mechanised logging and wood processing systems and the exciting opportunity for the industry to capitalise on this momentum with affordable capital investment in equipment."

The development and rugged design of machines specifically built for the harsh, hot Australian conditions makes them also ideally suited for the southern African climate and demanding operations. He said: "we have been through the expensive learning curve over many years of adapting machines originally designed for the freezing conditions of the northern hemisphere – so what country is better placed to pass on this expertise."

The Company makes no idle boast that it currently has the largest and best range of used forestry equipment in the southern hemisphere!

To best sum up the Company's activities their motto is – If it falls, drags, carries, loads, debarks, chips of saws wood – we sell it!

Interested buyers are invited to browse the Company's easily navigated website or for personal attention contact the owner Kevin Drum direct by email, fax or phone.



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Indigenous trees in South Africa: Is the market for wood and water growing?

Mark Gush and Barry James

South Africa is very reliant on its plantations of introduced tree species to meet its pulp and timber needs, and the benefits of this industry in terms of production, income generation and job provision are undisputed. The downside is that these benefits come at some environmental cost, not least the impact of the industry on water resources (Figure 1). Many catchment areas are consequently now closed to further afforestation, but economic growth and development continue unabated. Improved productivity is a potential solution to continue meeting demand, but have we considered carefully enough what grows naturally here – our wealth of indigenous tree species?

A solicited research project, initiated and funded by the Water Research Commission (WRC) and the Department of Agriculture, Forestry and Fisheries (DAFF), is studying the water-use, growth rates and economic value of the biomass of indigenous trees and forests in South Africa. The project (No 1876 as described in the 2009/10 WRC Knowledge Review) is being conducted by the CSIR, in collaboration with staff and students from tertiary organisations (Universities of the Witwatersrand and KwaZulu-Natal as well as da Vinci Institute) and consultants (ForestWood). It is a six-year project, currently nearing the end of its second year, and follows on from an earlier pioneering study, which explored water-use and growth rates in various indigenous tree systems in South Africa (see WRC report TT361/08 by Dye, Gush, Everson et al, 2008).

After an initial year of desktop type review work, field work has now commenced, and the project is currently measuring water-use and growth rates, and assessing the economic value of indigenous tree species and forests. Individual species with high use potential and value, such as Umzimbeet (*Millettia grandis*), Yellowwood (*Podocarpus spp.*) and Sneezewood (*Ptaeroxylon obliquum*) are being measured, together with measurements of water-use and growth rates in selected indigenous forests. Various techniques, specialising in the measurement of water-use within individual tree stems (Figure 2) and above forest canopies (Figure 3) are being applied. The water-use and growth measurements are being used to improve our understanding of how much water indigenous trees and forests use, and how efficiently they use it (water used per unit of utilisable stem growth generated). This will assist in evaluating the potential for indigenous trees to be more widely planted in appropriate areas in South Africa, limiting negative impacts on water resources. Results so far indicate that indigenous tree species use comparatively less water than introduced species, but are not particularly efficient due to their slow growth rates.

What about increased commercial use of indigenous tree species? Is there market potential, both locally and overseas for indigenous South African wood? The economic component of the project is investigating the potential markets and economic viability of indigenous tree products, particularly



Figure 1: Plantations of introduced tree species provide valuable products but at some environmental cost. (Photo: M Gush)



Figure 2: Heat Pulse Velocity system for measuring hourly sap flow rates, and resultant water-use volumes, in individual tree stems. (Photo: M Gush)



Figure 3: CSAT Eddy Covariance system, mounted on a telescopic mast, for measuring total evaporation (water-use) above the canopy of an indigenous forest (Photo: M Gush)

making, mining, or dam-building developments, go up in smoke every year. Many of the species are potentially very valuable and utilisation of this wood could satisfy the local demand for attractive, durable and unusual species. Internationally, demand is also growing for many of these species, although this was tempered by the recent global economic crisis. However, the biggest impediments to the regular use of indigenous woods are market resistance to new species, difficulties associated with extraction, milling and drying and uncertainty of supply. For furniture manufacturers running production lines the latter is an important factor, but if a species is grown and harvested on a continuous basis, this hurdle can be overcome. Recent experience has shown that architects and designers are enthusiastic about using wood that is unique and has “green” credentials, so in the short term the market for the more

wood, with a view to growing this sector. To date a very small number of indigenous woods have been used regularly on a commercial basis, and the bulk originates from the indigenous wood auctions in Knysna. Species such as Yellowwood (*Podocarpus falcatus* and *P. latifolius* mainly), Black Stinkwood (*Ocotea bullata*) and Wit Else (*Platylophus trifoliatus*) being some of the most well-known. These wood auctions are based on a sustainable harvesting programme implemented by SA National Parks in the southern Cape, but have recently been discontinued and an alternative marketing model is being investigated by SANParks. Apart from the southern Cape species there are well-known Bushveld species such as Red Ivory (*Berchemia zeyheri*), Tamboti (*Spirostachys africana*) and Wild Olive (*Olea capensis*), which are cut into wood turning blanks or finished products for sale and export (Figures 4 and 5).



Figure 5: Pens turned from various indigenous South African woods (Photo: B James)

In addition, it is not commonly known that vast quantities of wood, from trees condemned to be felled for agricultural, road-

unusual species exists in terms of “once off” items or small production runs. However, anyone embarking on this potentially highly profitable venture will need to be cognisant of the high costs of transportation, processing and storage.



Figure 4: Wood turning blanks from indigenous *Albizia adianthifolia* (Flat-crown) and *Berchemia zeyheri* (Red Ivory) tree species (Photo: B James)

In order not to place existing protected indigenous forests at risk, as demand increases it will be necessary to increase the supply base. There have already been some pioneering attempts at this in the form of experimental plantations of indigenous trees (Hans Merensky, Komatiland forests), as well as indigenous tree planting/livelihood programmes such as the Wildlands Conservation Trust “Indigenous Trees for Life” and Sappi Sandisa Imvelo initiatives. While growth rates are still slow, these initiatives together with other financial incentives for planting indigenous trees such as carbon sequestration credits and payment for ecosystem services (PES) schemes look set to expand the area under indigenous trees in South Africa. As that happens it will be useful to know more about the water-use requirements, growth rates and economic potential of this green treasure.

MIN

Mondi adopts a Wattled Crane

The Wattled Crane is critically endangered in South Africa. Sighting a new pair and discovering a nest is significant, and reporting the presence of eggs forms a vital part of conservation efforts.

In July 2009, a Wattled Crane nest containing two eggs was discovered by Mondi staff on the Homesdale Farm near Greytown in the KwaZulu-Natal Midlands. Wattled Crane can only lay up to two eggs at a time and only one of these is reared by the parents, the second is abandoned or eaten by predators.

The Endangered Wildlife Trust Threatened Grassland Species Programme, who assist the African Crane Conservation Programme (ACCP), rescued the second egg for captive rearing as part of their conservation efforts. Once the chick had hatched, she was named Andrea and sent to Gauteng to be puppet-reared at the Johannesburg Zoo. Andrea is now fully grown and has been moved to the breeding centre for introduction to a potential mate.

In August this year, while monitoring the nest, it was discovered that the Wattled Crane had again laid two eggs. The second egg was consequently rescued and Mondi adopted the chick and named it Mhambi, which means traveller. The company also donated R10 000 to cover the costs for the first year of its life.

“Wattled Cranes are the most highly endangered and rarest cranes on the African continent,” explains Viv McMenamin, Mondi Forestry and Land Director. “Only 250 birds remain in South Africa, with the most significant population residing in isolated pockets in KwaZulu-Natal. Mhambi will become part of the recovery programme’s breeding flock at the Bill Barnes Crane and Oribi Nature Reserve near Nottingham Road in KwaZulu-Natal. The chicks from the breeding flock will subsequently be released into existing Wattled Crane flocks in an effort to bolster the wild population.

“It is becoming increasingly apparent that setting aside areas to conserve functioning ecosystems, biodiversity and rare or endangered species is vitally important. The Mondi Wetlands Programme (MWP) aims to bring about the rehabilitation, wise use and sustainable management of South Africa’s wetlands.

“The MWP is playing a pivotal role in contributing towards the conservation of the Wattled Crane’s habitat. It gives us great pleasure to know that the work of the programme is not only protecting ecological networks, but also aiding the survival of the Wattled Crane,” says McMenamin.

The KwaZulu-Natal Crane Foundation awarded Lake Merthley “Crane Custodian” status in February 2010 in recognition of Mondi’s efforts to protect the birds and their habitat.

Saving the cranes

Without significant intervention it is likely that the wild Wattled Crane population will struggle to recover from the decades of population decimation.

The vast majority of Wattled Cranes lays only one egg, but a small percentage will lay two. The second egg merely serves as an insurance policy in case the first egg does not hatch. Soon after hatching, Wattled Crane parents will lead the first chick away from the nest to avoid predation, and abandon the second egg. The chick inside the second egg generally dies from hypothermia or is eaten by predators. The Wattled Crane Recovery Programme rescues these second eggs as soon as the first chick starts to hatch and rears the second chick using a costume and puppet to avoid human imprinting.

The Mondi Wetlands Programme (MWP) is a joint project between South Africa’s two largest NGO conservation organisations (WWF South Africa and the Wildlife and Environment Society of South Africa) and The Mazda Wildlife Fund.

For more information, go to <http://www.wessa.org.za/> or www.wattledcrane.co.za.



Viv McMenamin, Mondi Forestry and Land Director, with Mhambi, a Wattled Crane chick discovered near Lake Merthley in KwaZulu-Natal on Homesdale Farm leased by Mondi

Biomass transportation advances from Timber24

Focus on Forest Engineering 2010 saw timber supply chain solutions provider Timber24 give details on its fast developing biomass transportation division.

The success of a biomass operation and the costs associated with it depends to a large extent on the costs of the logistics of moving the biomass from source to processing site.

The location and access to the biomass source, the type of biomass (chips, residue, stumps), its condition (moisture, soil, ash content), multiple leads from in-forest to roadside, roadside to mill and even from processing sites such as sawmills to the biomass beneficiation site, the timing of the operation and the weather combine to allow for a varied set of factors that add costs to the transportation of product.

This is further impacted on by the fact that biomass is in many instances a low weight, high volume commodity. This again adds to the inefficiencies that can result from the relocation of the product.

Talking on the subject at Focus on Forest Engineering, Timber24's operations director, Blake Ferguson gave insight on the advances made and the lessons learnt by the company since it turned its focus to the cost-effective movement of biomass.

Trucking configurations

The trucking configurations currently deployed by Timber24 in its biomass operation includes four truck draw-bar combinations, each using the Unipower hook-lift system to load and offload the 48 bins that form part of the overall system and in which the product is carried. Each bin has a 40 m³ carrying capacity.

Mercedes-Benz Actros 3344 truck tractors serve as primary impellers with each unit providing for a 56,6 tons Gross Vehicle Mass (GVM) with an effective 28,5 ton payload capacity.

Each unit has three bins onboard, two bins allocated for sawdust or chip transportation while the third is used for slat



Hook-lift systems allows for the on and offloading of the bins

transportation. Roundlog trailers also double to provide for slat removal.

Each of the configurations utilises Mercedes-Benz Actros 3344 freight carriers as truck tractor units. The rigs, with a 56,6 tons Gross Vehicle Mass provide for a 28,5 ton payload.

Lessons learnt

"When Timber24 initially got involved in the movement of biomass, the company knew that it didn't have all the answers," Blake Ferguson said. "However, since the initial start of the operation and the cooperation of all the stakeholders involved in the process, we've made significant progress in ironing out the glitches to allow for a solution that works," he continued.

Initial stumbling block was to engineer a bin that provided for enough loading space while remaining within the set vehicle specifications.

The initial designs also came without the tarps that were added later to protect the finished product against inclement weather. In terms of the overall payload management system, it also proved to be vital to be able to track each bin in order to collect it on time and provide for a new bin while also ensuring the safety of each bin. Some initial designs contained aluminium that was stripped of bins within hours of its delivery to the end-user.

Part of the payload management system also involved the synchronisation of bin delivery and collection schedules with the schedules of sawmills. When out of sync, significant inefficiencies can result.



Drawbar combinations with bins form the backbone of Timber24's current biomass operation

to page 30 ➔

Trucking Wellness helps logistics industry fight HIV/Aids

World Aids Day, held on 1 December, was supported by Imperial Logistics who are a founding partner of the Trucking Wellness programme, a Sida/National Bargaining Council for the Road Freight Industry project.

Since its launch in 1999, Trucking Wellness has distributed an estimated 10 million condoms to truck drivers and women at risk of HIV/Aids, treated in the region of 160 000 patients through over 20 mobile clinics and reached just under 450 000 people.

"The degree to which the road freight industry either wins or loses the fight against HIV/Aids impacts every other industry and/or sector," says Abrie de Swardt, Imperial Logistics marketing director. He explains, "The Trucking Wellness project, which focuses on the provision of basic clinic services, through being a combination of Roadside Wellness Centres and Mobile Wellness Centres and provides the Wellness Fund ARV Treatment Programme has provided us with an effective way in which to support our employees, whilst contributing to the industry at large."

The Wellness Fund ARV Treatment Programme, in particular empowers those living with HIV/Aids within the system by giving them access to effective ARV treatment. "Accessibility to quality primary healthcare is critical for drivers who ensure that manufacturers' products reach their final destination," adds de Swardt.

Imperial Logistics provides the project with annual financial support for three of the Road Freight Wellness Centres and four in-house centres that form part of the project. The Group also contributes financially towards the Industry Wellness Fund for the treatment of employees who are HIV/Aids positive. MN

Cat to produce on-highway trucks

The first model in the new product line, the Cat CT660, will be released in March 2011.

The truck will be unveiled at Conexpo in Las Vegas, USA, on 22 March 2011. However, the first trucks will only be available for customers towards the end of 2011. Cat has used its extensive experience, existing technologies and knowledge of its customers work sites in developing this line of trucks.

The trucks will offer custom solutions to a number of industries and applications, including logging and quarry material movement.

These vocational trucks will offer a full range engine ratings and torque capability options. The specifications include a Cat CT11 engine with ratings from 330 to 390 hp (246 to 291 kW), a Cat CT13 with ratings from 410 to 475 hp (306 to 354 kW), and in 2012 a Cat CT15 with ratings from 435 to 550 hp (324 to 410 kW).

The Cat CX31 torque converter style automatic transmission will be used. It has three standard locations for rear Power Take Off drive positions. Other transmissions options will also be available, including manual and automated manual transmissions. Initially the trucks will only be sold and serviced through the Cat Northern American dealer network.

Source: www.cat.com

MN

From page 29:

Biomass transportation advances from Timber24

The ability to transport both raw material and end-product onboard the same unit also added significantly to the cost-effectiveness of the operation.

The constant availability of raw material also proved to be important. If not, bins remain unproductive and lost to the overall system with system flexibility also significantly compromised.

Logistical planning also involved making provision for the weather, route and access to the raw material.

Onboard weighing capacity is also vital, Ferguson said.

What does the future hold?

In terms of inbound traffic, from raw material suppliers to beneficiation site, Ferguson sees a fleet of smaller, specialised bins, allocated to specific raw materials coming to the fore. This will prevent product contamination from occurring while also adding to the overall flexibility of the system.

Biomass bailing and bundling will also allow for increased cost-efficiencies in terms of transportation while also providing for diverse material intake. He also expects that onsite chipping will make easier to transport biomass.

On the outbound side, he sees side tippers and walking floor trailers for the transportation of the finished product being used more. MN



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www.operationkhanyisa.co.za

The “voice” of wood

The timber industry is represented by a number of associations who each individually promote the benefits of wood – whether it’s a call to plant more trees in support of forestation or to build and live sustainably with wood to preserve our fragile environment. Until now, each has been an individual appeal to embrace wood throughout the value chain, but through the launch of South Africa’s first Wood Foundation, the industry now has one official voice representing the generic benefits of wood to the general public and industry-related bodies.

Chairman of The Wood Foundation, Roy Southey, elaborates, “Our core objective is to promote the vital role wood plays in influencing our lives through sustainable forestation and building practices.”

The seed was planted in 2008 when preliminary work began under the banner of the “Timber Marketing Forum”, which was later formalised and officially constituted in June 2009. Further developments led to the decision to promote wood throughout the value chain making it more inclusive for all, from the grower through to the owner. This resulted in the re-branding of the Timber Marketing Forum to The Wood Foundation.



The Founding Association Members comprise key industry leaders from Forestry South Africa, the Institute for Timber Construction, Sawmilling South Africa, the South African Utility Pole Association, the South African Wood Preservers Association, the Thatchers Association of South Africa and the Institute of Timber Frame Builders (formerly the Timber Frame Builders Association) and one Affiliated member, the Department of Agriculture, Forestry and Fisheries. As leaders in their fields of expertise these members have demonstrated an exceptional level of commitment to the future of the timber industry and its customers.

The launch of The Wood Foundation comes at an opportune time in South Africa with a growing demand for sustainable forest management practices, support of the local economy and job creation, green building practices and the implementation of energy efficiency legislations such as Green Star SA and the South African National Standards 204.

The facts speak for themselves. Wood is a renewable material with an exceptionally low carbon emissions footprint, long life and extensive durability through correct treatment. It is easy to maintain and has excellent insulation and acoustic characteristics, while also being flexible to work with and aesthetically pleasing.

Roy explains, “There is a basic lack of common knowledge about wood in our country. If we look at the building sector for example, wood has been replaced with alternative building materials such as glass, plastic, cement and steel, which are produced by drawing on precious and already depleted natural resources.

“Without renewing these resources nothing is returned to the environment and we continue to contribute towards the devastating effects of global warming. Whereas the choice of wood as a building material and the choice of wood products, means we are supporting a natural product that it is renewable through the planting of more forests.”

The fact remains that wood has huge environmental benefits over other building materials. It is completely biodegradable, serves as a great insulator, uses less energy to process than steel, concrete, aluminium or plastic and is 100% renewable.

SAWMILLING

Furthermore, at a time when environmentalists are asking homebuilders to make educated decisions about the materials they use, it is becoming an increasingly ecologically sound choice for construction as well.

Forest management contributes to climate protection not only through the formation of carbon sinks, but also through the sustainable use of wood. Wood is a CO₂ neutral raw material and its use means firstly that CO₂ emissions are avoided and secondly that the CO₂ absorbed by trees can be stored in the longer term. With sustainable forest utilisation, the CO₂ released is resequstered by the regrowing trees and the cycle is closed.

"By supporting the entire value chain from the grower to the saw millers and the builders, you are choosing to be environmentally conscious and actively supporting the renewable cycle," says Roy.

The Wood Foundation's awareness campaign is aimed at uniting likeminded people who support more than just the use and benefits of wood, but people that embrace a lifestyle that supports an environmentally conscious future.

As a non-profit organisation, The Wood Foundation is reliant on a membership programme to fund its public awareness campaign. Associate and affiliate

membership is open to industry associations, companies and private individuals and each membership means one step closer to wood being the preferred and natural choice.

For further information on becoming a member, please visit the website at www.thewoodfoundation.co.za or email enquiries@thewoodfoundation.co.za.

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Institute of Timber Frame Builders starts to bed down

The recently formed Institute of Timber Frame Builders (ITFB) the new body that arose from the merger earlier this year of the long standing Timber Frame Builders Association and the Institute of Timber Construction, is making progress on numerous fronts.

That's the essence of a report back on the organisation's recent general meeting where a full agenda was addressed, underlining the relevance of the organisation to the future of the timber construction sector.

Within the context of the ITFB's generic mandate of promoting the interests of the timber frame construction sector, specific ongoing aspects being addressed include a new training course, the establishment of a training college, a new inspectorate, publication of a new magazine serving ITFB members, and a membership drive to strengthen representation.

The general meeting followed closely on the successful Interbuild exhibition where the ITFB initiated and The Wood Foundation sponsored the construction of a timber frame home in one of the exhibition halls.

The structure attracted huge interest and went a long way towards delivering the message that timber frame homes have a definite place under the South African sun in future.

Indeed the prospects of the sector was central to a presentation at the general meeting by the designer of The Wood Foundation home, Jacques Cronje, a recognised expert in timber home design.

Cronje's presentation reiterated the well-known green, aesthetic and structural benefits of timber structures, while pointing out the fact that timber is used in residential property construction around the world with up to 90%

of homes in Canada, for example, being constructed with timber, whereas in South Africa barely 1% of residential structures are in timber.

He predicted that as the pressure on resources increases and efforts to slow down global warming escalate, there will be a greater shift towards the use of timber in housing construction locally.

Werner Slabbert, ITFB vice-president and Chairman of the SANS 10-082 advisory committee to the SABS SC 59D committee, points out that the use of timber in construction is strictly regulated under SANS 10-082. All ITFB members are compelled to build in accordance with this regulation and other SANS-related building codes and practices.

"Timber frame construction requires a minimum standard to be set. Many years ago it was a free-for-all in terms of building practice for timber structures but today the required legislation is in place," says Slabbert.

He points out that the standard in this respect is constantly being updated as timber and building technologies keep changing and the ITFB is a key player in this constant change, serving on the committee that reviews the regulations.

He called for anyone building a timber frame home to ascertain that the contractor is an ITFB registered builder to ensure a seal of controlled quality.

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ITFB Exco left to right: Leon Bekker (Treasurer), Jenny de Waal (O/A), Werner Slabbert, Stuart Meikeljohn (President) Gerard Busse (marketing)

Chippers from Staalmeester

With 15 models to choose from, and capacities of 8 m³ to 200 m³ of chips per hour, these low maintenance chippers are offered at a reasonable price.

The robust heavy duty industrial Heizohack drum chippers from Germany can handle trunks from 300 mm up to 800 mm and is fitted with an onboard electro hydraulic remote control to adjust the infeed speed of the steel conveyor. Logs are fed into the machine

through a steel conveyor and rollers. Chip size is altered by exchangeable sieves and by increasing the drum speed up to 750 rpm. This ensures high-quality chips of a constant size. With crane feeding the Heizohack really comes to its full potential for the contractor who

needs big volumes of chips constantly. The performance of these chippers is outstanding.

The latest Heizohack HM 8-400 can now be fitted with a Perkins Lovol 75,6 kW Diesel Turbo Charged Engine, used on all Foton tractors. Spare parts for these engines are also available countrywide. At 1 800 rpm the Perkins Lovol Diesel Engine has a 18% power reserve when cutting logs with a diameter of 400 mm.

For more information on these state-of-the-art wood chippers visit: www.heizomat.de.

Staalmeester also provides diesel, electrical or PTO driven log splitters from BGU Germany at reasonable prices. MN



Heizohack with diesel engine

From page 34:

Institute of Timber Frame Builders starts to bed down

Moving on to other aspects arising out of the general meeting, ITFB spokesperson Jenny de Waal said that the organisation's new look magazine would have more content, depth, perspective and contributions from suppliers and relevant stakeholders in the timber industry.

The membership drive meanwhile is gaining momentum and it's clear that the ITFB is beginning to make an impact in this respect. A new brochure will be published shortly, highlighting the aims and objectives of the ITFB and the benefits of membership.

2011 will see the Timber Framing Academy ready to offer a short two-week course in timber frame construction. There will be two options for training – a short two-week course and a more intense two-year learnership which will result in a qualification.

"The ITFB is definitely beginning to find its feet," says Stuart Meikeljohn, the organisation's president. "We are establishing our credibility and we are forming the foundation of what will clearly become a significant representative body for a sector of the timber industry that has been somewhat fragmented until now. 2011 will see us building on this momentum and we are extremely confident about our future role." MN

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18015 Wood 11/2010

Precision machines for the saw industry

Mummenhoff are specialists in the development and construction of precision machines for the saw industry, and are always busy with innovative technologies for the testing, tensioning and levelling of circular saw and framesaw blades.

Apart from its testing, tensioning and leveling machine, Mummenhoff also construct a whole range of customer specific special machines such as machines for bore processing, handling systems, automated feeding, spot welding devices for sandwich saws as well as surface grinding and bore grinding machines and was developed by Heinrich Mummenhoff, a trained saw leveler and industry foreman.

In 1967 he established his first own manufacturing business, which he successfully managed for 25 years. During this time not only were numerous patents developed but also a product specific record of a special kind. With a diameter of five metres, his company produced the world's biggest sawblade at that time and was therewith awarded with an entry in the Guinness Book of World Records.

After that he was involved with automated levelling and tensioning technologies on sawblades for many years and developed testing machines and rolling facilities,

For this article, however, we will be looking at its modern testing and tensioning machines.

Top technology for manufacturers, service and users

Testing and tensioning machines by Mumtec considerably contribute to the improvement and assurance of quality. You will therefore find the machines worldwide where quality is spelled in capital letters, and where value is placed on innovative technologies.

Precision machines are predominantly applied in the production or repair of steel cores and circular sawblades, diamond cutting discs, segmental circular saws, hot and friction circular saws, circular knives and framesaw blades.

Due to testing and tensioning machines, sawblade manufacturers profit from quality assurance according to ISO 9001 and an optimisation of product quality. Axial run-out and tension properties become objectively comprehensive due to numerous visualisations and documentation possibilities. Automated machine processes also help to reduce the work of the testing staff and the saw leveller. This way your personal costs will have room to breathe.

For service businesses, the deployment of Mumtec machines quickly pays off. Ideal axial run-out and tension properties, and this in a reproducible and documentable quality are decisive advantages in competition that are valued on the customer side.

Larger saw businesses with their own sharpening shops profit from these machine technologies. It relieves strain on the personnel and assure the quality standard in maintenance. The processed saw blade feature an ideal stability and operating life so that the downtime and set-up time are reduced to a minimum. Under today's competitive conditions this is a decisive advantage.

Saw testing machine EPG – 03 – measuring quality

Applied measuring technology is crucial since the result of all further treatment processes depend on the accuracy of the determined measuring information.



Michael Harris of Harris Sawing Equipment

This saw testing machine was developed for testing and rolling machines and is the core of Mumtech's measuring technology. Exact conclusion can be drawn from the determined measuring data for the axial run-out and the tension of circular sawblades and steel blades.

In the computer system, measuring values are processed and provides the necessary transparency and informs about all axial run-out and tension properties of saw and steel blades.

Hard facts for the ideal axial run-out and perfect tensioning

The P-Series testing machine is suitable for measuring circular sawblades and steel blades with a diameter of 250 to 3 500 mm. The individual measuring values provide necessary transparency to have all run-out and tensioning properties under control.

Longer machine operating times increases output. The operating times are, however, influenced by the standstill of period of the applied tools.

For high-quality sawblades axial run-out and tension are part of the decisive quality factors. Due to testing machines, both are under control and one can be sure that only sawblades with ideal tension and correct axial run-out are applied.

Perfect tension line for circular and framesaw blades

The robust tensioning of the S-series has been especially developed for operation at sharpening centres and at saw

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Timber prices in China move upwards

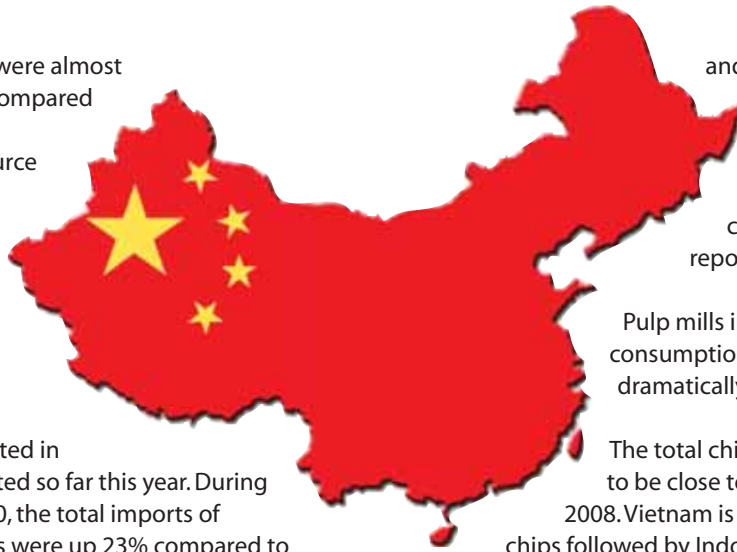
Continued increases in demand for wood raw-material from sawmills, plywood plants and pulp mills in China has pushed domestic log prices upward and many Chinese companies are increasingly exploring the opportunities of importing more logs and wood chips to supplement the domestic fibre sources.

The tight log supply has resulted in higher prices for domestically sourced logs this year.

Chinese fir sawlog prices were almost 17% higher in the 2Q/10 as compared to the same quarter in 2009, according to the Wood Resource Quarterly (WRQ). Eucalyptus logs, mainly used by the pulp industry, have also become more expensive the past 12 months, reaching new record-highs.

The continued high costs of locally sourced logs has resulted in higher volumes being imported so far this year. During the first eight months of 2010, the total imports of softwood and hardwood logs were up 23% compared to the same period in 2009.

The importation of tropical hardwood logs has increased almost 50%, and Papua New Guinea has overtaken Russia as the major hardwood log supplier to the Chinese sawmilling



and veneer industry. During the first eight months of this year, imports of wood chips to China have more than doubled compared to last year, as reported in the WRQ.

Pulp mills in China have increased their consumption of imported wood fibre dramatically in just two years.

The total chip imports for 2010 are likely to be close to five times as much as in 2008. Vietnam is by far the largest supplier of chips followed by Indonesia and Thailand.

The three countries together currently supply about 90% of all imported chips.

Source: Wood Resources International LLC

MN

From page 37:

Precision machines for the saw industry

manufacturers. Already in the basic provision the circular sawblades and steel blades enable a perfect rolling procedure. The S1600 tensions sawblades with a diameter of 250 mm to 1 600 mm. The slightly larger S-2000 can even treat sawblades with a diameter of up to 2 000 mm. The optional framesaw support provides for real multi-functionality. With only one rolling machine circular and framesaw blades can then be ideally tensioned.

A special grid width adjustment enables the quick and easy adaptation of the frame saw retention in different saw widths up to a maximum of 200 mm.

The solid and effective design for the rational application at sharpening centres or saw manufacturers already becomes visible with the construction of the S-Series. Two driven rolling

shafts provide the highest precision during the rolling process in connection with maximum pressure of the rolling system of 6 tons. The rolling machines of the S-Series have also been provided with tangential adjustment on the feeding carriage for the compensation of disturbing pressure and draft influences.

Due to the multi-functional application of the rolling machines in circular and framesaw manufacture, production procedures can be optimised. Therefore, the S-Series rolling machines are an investment which quickly pays off.

The modern way of testing and rolling

The generation of TTM machines was designed for operation in sharpening rooms or at sharpening services. For larger sharpening centres and for the operation in saw manufacturing the TTM-A-Series is available as a fully automated version. Both ranges are based on the approved technology of the big PSR-Series.

For more information contact Harris Sawing.

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Constant improvement at Ritlee

Marc Custer of Ritlee lives by a saying. "We are constantly improving" has been his mantra over the years and the last 12 months has not been any different.

During this time there have been a number of adjustments made to the manufactured range of equipment. These include the following:

The Ritlee Wood Pecker Wood Shaver has just seen the launch of its first 2,4 m pole shaver to the South African market. Says Custers, "It really works exceptionally well and is producing some 16 m³ of wood shavings per hour. The more common 1,2 m pole shaver is still our best seller and has had the following improvements built in: It features a shaving block carrier; bearings are large high speed precision FAG bearings; the wood container bin is now running on 4 x vertical and 4 x horizontal wheels in special channels; and the wood container bin is now standard double reinforced walls and driven by a 26 mm chain and using float self-aligning couplers."

The Ritlee 225 wood chipper now comes with standard three version of discharge shoot. This can be added on at purchase. The lemon profile direct charge can now chip and discharge chips directly under trees to be used as mulch. There is no damage to the trees during this process. A shortened standard for wood and chip extraction from plantations for composting and where shoot does not damage citrus or nut branches; standard discharge. Marc did say that customers must please not try make discharge longer than their standard discharge shoot as this could cause blocking.

Continues Custers, "As far as the new tractor mounted 225 wood chipper is concerned, none of the similar models of the opposition even come close to performance, durability and capability of our 225 chipper. One of my customers who is a farmer in KwaZulu-Natal challenged me on this saying 'If your 225 Tractor mounted chipper handles recently cut down Black Wattle from 180 mm diameter, then we have a deal.' Needless to say I got the deal!"

With regards to the The Ritlee 750 self-propelled lawnmower is still as was and still working exceptionally well and the Ritlee TM3 Compost turner is still as was and is proving to be one of the most reliable, durable and efficient turners on the South African market.



Standard discharge



Lemon discharge



Shortened discharge



Timber construction success on remote Mozambique island

Development of the tourism potential of an idyllic island north of Maputo has inadvertently provided an ideal opportunity to demonstrate the myriad attributes of timber in construction.

The setting for this “tour de force” in the use of timber is Cova de Tubarao on Macaneta Island, a 70 km long, 15 km wide getaway off the Mozambique coast, characterised by wetlands and dunes.

Locals inhabiting the island live in houses constructed of reed and timber from the indigenous trees, generating a meagre living mainly from fishing, so the advent of the lodge brought to the tiny island economy much needed tourism income and job creation.

Developer/entrepreneur/investor Roelie Jacobs originally acquired land on the island in 2007 for the development of a lodge. He subsequently acquired a second section this year and this is currently being development in terms of a new lodge, together with a camping site and chalets.

The existing lodge is being expanded with a new restaurant and bar, all the while taking due care to protect the fragile ecology and habitats of the island.

Visitors attracted by the island’s isolation and ambience have been drawn from far and wide and the intention now is to build on that demand and broaden the promotional efforts. From a structural point of view, the island presents many challenges. The bulk of the timber is derived from Graskop in Mpumalanga, supplied by Roelie’s “Houtkraal” timber treatment plant.

Other timbers such as decking, cladding and plywood come from various suppliers in South Africa, while thatching reed and grass comes from Macaneta Island itself.

Logistics wise, Roelie trucks in the timber himself to the coast where the materials are off-loaded at a ferry point by hand, transferred to the island, reloaded onto a tractor and trailer, transported to site and finally off-loaded by hand once more. Taking into account soil, weather and other conditions on the island, the timber is fully treated prior to transportation, with Tanalith (CCA) supplied by Arch Wood Protection, thus perpetuating a long relationship the company has had with Roelie whose Graskop operation also supplies his distribution depots in Boksburg, Heidelberg, Witbank, Vereeniging, Graskop and Kimberley with treated poles.

The versatile Roelie designed the lodge personally and his previous background in the thatching industry comes in handy with his island venture.

The Cova projects are challenging given the distances and local conditions involved (timber foundations have to be sunk in sand dunes) and the need to preserve the local ecology and restore the dunes and vegetation. Roelie himself carries out the construction work and it has taken three years to bring the island’s facilities to the stage they are now, while work on the new facilities is getting under way.



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TREATMENT



Mozambique's Macaneta Island splendour and South African timber working in harmony at Cova de Tubarao

The existing structures have stood up well to weathering and insect attack in the coastal climate over the last three years, bearing testimony to the effectiveness of the timber treatment up to H4 (in-ground contact) treated with Tanalith C wood preservative.

Aesthetically the original lodge blends with the surroundings and its placement and positioning optimises views and access to the beach without being intrusive.

Government regulations regarding building plans and lodge development had to be taken into account and approval from the authorities obtained.

An interesting aspect is that while construction above the ground belongs to the owners of the lodge, the land continues to belong to the Mozambique Government.

The lodge is reached via Nelspruit, Komatipoort, Maputo, Xai, Xai and then on to Maracuene where you meet the ferry (the ferry's GPS coordinates are: S25Deg 44.060, E 032Deg40,677). GPS coordinates for Cova de Tubarao are: S25Deg 43.533, E032.44.969.

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Timber treatment plant makeover brings benefits

Khulani Timber Industries, one of Limpopo's longest established timber treatment operations, recently commissioned Arch Wood Protection to upgrade Khulani's treatment plant in the interest of greater efficiencies and productivity.

The Modjadjiskloof, Limpopo-based plant makeover was carried out in May 2010. Khulani has been in the treatment business for a number of years. Their original CCA plant had been in use for a number of years and hence with general wear and tear and business growth, it was in need of improvements to achieve greater efficiencies, thus prompting the approach to Arch.

During the early stages of the project Arch undertook an engineering review of Khulani's plant. The upgrade consisted, firstly, of a new correct sized tank farm, allowing for fewer mixes during the day, including a strength adjusting tank which is a unique innovation in the industry.

The strength adjusting tank allows the operator to store high solution strength chemical temporarily, for treating high retention H5 hazard class products and utility poles, while reducing the strength of the solution for H4 and H3 applications as the need arose.

This allows for a more accurate treating process and leaves less room for possible over-treatment, which can occur when a plant moves from H5 to H4 or H3 treatments or from a higher to lower solution strength.

Arch also installed a chemical bulk storage tank and an IBC tank stand for the dispensing of Weatherwood solution into the mix.

"Tanalised Weatherwood" to give it its official name, is a combination of well known timber preservative Tanalith C

(CCA) and the Weatherwood additive, a specially formulated water repellent additive.

The use of a bulk storage facility has become Arch's preferred way of supplying customers in that from a safety, health and environmental point of view, the risk of chemical exposure to operators is minimised and the amount of empty chemical drums stored on site is reduced.

Moreover, the bulk tank also greatly reduces time taken to prepare a new chemical mix, the product is easier to dispense and it's safer in that the operator does not have to move the mix around the site. A key component of the upgrade was to reduce the overall time of the treatment cycle which had been too long, taking into account issues such as charge volume size, diameter and length of the material treated. Arch designs plants to use a similar treatment cycle time, the filling stage or flooding of the vessel being eight to 10 minutes, followed by the initial vacuum. These are pretty much standard times so that the only variable is the time it takes to run the pressure cycle which, in turn, is dependent on the type of timber product being treated.

Modifications were also made so that the plant could move away from a dry vacuum process to a wet vacuum process which is most commonly used in South Africa by treaters using Tanalith C.

The design of the plant was done by Darren Marillier, Arch's Sales Manager, and commissioned by Daryll Ehrke, Customer Account Manager for the northern regions.

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**Arch
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Arch Wood's plant training course goes down a treat

Arch Wood Protection's training course for treatment plant operators has been a runaway success.

Introduced in 2008 the Tanalith Operator Training Course, as it's officially known, has been well supported and has been met with great appreciation by management and staff alike at participating timber treatment plants countrywide.

The course was developed to fill a need identified by Arch for the formal training of treatment plant operators in the interests of greater safety, health, environmental protection, good waste management and product cost-efficiency. The three level Arch course, consisting of 10 modules for each level over three years, is endorsed by the SABS and SATAS and is designed as a workplace initiative to supplement the SAQA accredited treatment plant operator training provided by Tirhani Skills for Africa.

The operators undergoing the Arch course are nominated by the customer and training notes accompany the courses in the operators' language of choice.

Inversion factors and formulae for wood for energy

Coford has produced a technical note which explains the conversion factors commonly used in the forestry biomass sector.

It is possible for there to be many different units used along one value chain. For example the forest owner could be paid per ton of wood removed, harvesting machines could measure their production in cubic metres and chips could be recorded as loose volume (cubic metres). One also needs to know the amount of energy that can be produced by the wood product that they are buying.

This note describes the different units used. It uses a formula to determine the volume of a log, and then describes solid volume factors for stacked logs. An overview of the density of different wood species is given, and incorporates different wood moisture contents. The energy content of wood is then described. Conversion factors are then produced and backed up with convenient diagrams. Lastly, the energy content of wood biomass at various moisture levels is compared to various fossil fuels, and figures are provided on how much wood biomass would be necessary to replace the different fossil fuels.

The document was produced by Pieter Kofman (Danish Forestry Extension).

Source: *Logging-on*

MN

Adding interest to the learning material is a delightful cartoon character developed specially for the programme, going by the name of "Mfundo" (a Zulu word for keen to learn), who is used in various poses to illustrate work done by the operators.



Arch's Gerard Busse, Arch customer account manager Absolom Mngomezulu and Merensky Timber's Donovan Williams

Training is provided on site by Arch account managers rotating among the participating plants monthly. Visiting Arch customer account managers also undertake practical assessments of operators' progress, evaluating the previous month's training and ensuring competency before they move on to the next training module.

Level 1 of the course covers aspects such as components of the plant, mixing procedures, personal health and safety, working out the solution strength and basic treatment processes.

Level 2 incorporates more theoretical content such as timber and wood preservation technology, emergency procedures, planning of charges and loads, advanced treatment processes and troubleshooting.

Finally there is level 3 which deals with management issues related to plant, legal compliance, productivity, costings and more besides. Bronze, silver and gold certificates respectively are issued upon completion of each level.

Points out Arch Marketing Manager Gerard Busse "Operator training is not dependent on an external training facility, training is on the job, it's tailored to the customer's particular plant and is a blend of theoretical and practical experience while an evaluation is competency-based, thus overcoming issues of exam nerves, language barriers and levels of education."

Busse reports that he was recently privileged to visit a number of plants where certificates were handed out to qualifying operators. "It's rewarding to see the commitment of the operators to the course, the support they get from management and the respect they have from their colleagues," he says.

"There's no doubt the course has encouraged professionalism and pride in the treatment operations area while of course the major outcome is improved levels of safety and operational efficiency at treatment plants."

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Iliad Africa Trading is a recognised force in the fitting and board products market with well-known companies such as SDT, Citiwood and Chipbase offering a turnkey service to the woodworking manufacturing industry.

As a pillar of Iliad Africa Trading, it is SDT's strategy to meet the product needs of the kitchen and furniture industry through the focused sourcing and redistribution of goods to the end user.

SDT supplies quality products from around the world in order to give the end user a large variety of choice when choosing fittings for a particular project.

SDT is very excited about its latest product, the "Soft Closing" runner that has a loading capacity of 40 kg.

Its super smooth sliding action offers effortless opening and closing of all cabinet doors and a full extension design provides for a clear view and



Double wall draw system



A sample view of the showroom at SDT

unrestricted access to drawer contents. Its ergonomic and friendly design makes the SDT SM01 a delight to use and is competitively priced for the market.

Classic European styling also characterises the range of handles at SDT. From ultra modern elegance to the old world charm of traditional ranges there is a product at SDT to satisfy even the most discerning taste.

Chipbase is a Cape Town-based company, with branches in George, Johannesburg and Port Elizabeth. Its primary function is as board merchant, specialising in the cutting and edging of all board products.

It stocks a wide range of melamine colours as well as products by PG Bison and Sonae Novoboard. A large range of post formed tops and kitchen and cupboard PVC wrap doors complete the range.

Each Chipbase branch has Altendorf panel saws, Ima edgebanders and drill presses which cuts,



A Chipbase branch in Johannesburg

All branches are equipped with the latest high-tech saws, edgebanders, multi-borers and most machines include a cutting program which offers customers a comprehensive service.

As part of the highly regarded Iliad Group, SDT, Citiwood and Chipbase pride themselves on personal relationships, which is built on the ability to thoroughly understand the client's needs.

Capable representatives and management which is supported by the Iliad Groups steering and executive committee who take a personal interest in your particular needs.



All edging is done on IMA edgebanders



Striebig panelsaws at Citiwood

edges and drills all board products. Chipbase also offers a cutting and edging service which opens up huge opportunities for individuals wanting to start their own businesses.

This would enable them to source the material without having to lay out the capital of buying machinery and finding premises. Chipbase can also deliver from each branch.

Citiwood has been in operation since 1980 and currently have five branches situated in Johannesburg, Vereeniging, Pretoria, Durban and Cape Town and has been a part of Iliad African Trading since 1997.

Citiwood stocks and supply the full range of PG Bison, Sonae, Masonite, plywood as well as a broad range of hardware products supplied by SDT.

As wholesalers, Citiwood supply loose as well as bulk bundles to the industry.



Warehouse at Citiwood

130 Years, Congratulations!

It has been over two decades that Polybond Pty, 100% BEE company, has been a supplier to Sealy in South Africa. It has been a relationship that has revolutionized the bedding industry with the introduction of Polymatts™, high performance foam replacement pads, which are used to reduce the amount of foam in beds. Making them more environmentally friendly and safer.

In line with modern European and American non-woven synthetic fibre producers for bedding markets, Polybond supplies thermobonded, needled and bonded fibers using a combination of these processes.

Being an ISO accredited company Polybond ensures that Sealy is able to deliver high quality beds to the market by also supplying mattress protectors (stiffypads) and thermobonded fibers.

Our Distribution Centres in Pretoria, Durban, and Cape Town allow us to deliver timeously to Sealy.

A key driver of Polybond as a supplier to Sealy has been the investment in technology and people, the company looks forward to ongoing growth and development with Sealy.

We at Polybond would like to congratulate Sealy as it marks 130 years of supplying high quality beds.



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"We do it with fibre"

Sealy celebration underscores local timber innovation

The 130th anniversary of what could be described as the most recognisable global sleep product brand, Sealy, sparks the question what relevancy this has for the local timber sector.

Turns out, quite a lot, with important timber procurement, processing and distribution innovations implemented to allow for the output that exits the Bravo Group Manufacturing's base-frame manufacturing subsidiary, Bravo Group Sleep Products (BGSP) on a daily basis.

But that's pre-empting the story.

The Sealy brand's history can be traced back to the arrival in 1881 of Daniel Haynes in the town of Sealy, located some 91 kilometres southeast of the Texas state capital, Austin. Sealy at the time served as a relatively important rail juncture point between the towns of Galveston and Temple.

In 1885, Haynes, a cotton gin builder by trade, invented a process and a machine that allowed for the commercial production of a felted, non-tufted cotton mattress, a commodity, which at the time, didn't exist.

An immediate success, the process was patented in 1889, this allowing other producers to start building the product, known as the "Mattress from Sealy".

In 1906, Haynes sold all of his patents and knowledge to a Texas company that took the name "Sealy". Here, a young advertising executive, Earl Edwards, launched Sealy on the road to national prominence. Edwards placed Sealy mattress ads in *The Saturday Evening Post* and *Ladies' Home Journal*. Edwards ensured that Sealy registered its name, developed a trademark, and gave Sealy the slogan "Sleeping on a Sealy is like sleeping on a cloud".

Licensed production

Edwards' next idea proved to be pivotal in Sealy's continued evolution. He understood that more production facilities

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The old Transvaal Mattress Company building

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From page 49:

Sealy celebration underscores local timber innovation

equalled expansion. This prompted Edwards to follow Coca-Cola's lead by appointing licensees that oversaw the production of mattresses. By 1920, Sealy had 28 licenced plants, the first mattress company to establish a licensing programme.

This would also eventually lay the foundation of Sealy's worldwide reach as independent producers from across the



Five Weinig Unimat 500 moulders form the backbone of BSPG's base manufacturing division



Pine and gum used in frame building

globe received licenses to manufacture and market Sealy products on behalf of the parent company.

The formation in 1895 of the Transvaal Mattress Company (TMC), laid the foundation of what was to be South Africa's first local Sealy manufacturer and what would later become the Bravo Group, the current local licence holder for all Sealy products that are manufactured locally.

The 1964 listing of the Associated Furniture Company's (Afcot) on the JSE and the subsequent amalgamation of a number of furniture and bedding manufacturers including Grafton Art,

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Everest Upholstery, Transvaal Mattress and Edblo also saw the first Sealy mattress being produced locally in 1967.

Further restructuring saw the eventual formation in 1999 of the Steinhoff Africa Furniture Division, the Sealy license holder for South Africa at the time. The 2008 sale by Steinhoff of its furniture division to ABSA Private Equity saw the formation of the Bravo Group, which to date holds the Sealy license for South Africa.

All Sealy products, whether mattresses or bases, are manufactured locally in accordance with the manufacturing and quality standards specified by Sealy Inc. USA to ensure adherence to international manufacturing and quality standards.

These standards are in turn enforced at all of Bravo's bedding production sites, those located in Johannesburg, Cape Town and Durban.

In addition to the Sealy products produced locally by Bravo, it also spearheads the production of other leading bedding product brands available locally.

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The squaring and finger-joint cutter unit on the Grecon finger-joint line



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From page 51:

Sealy celebration underscore local timber innovation

The focus remains on timber

The BGSP's main manufacturing site, located in Industria, west of the Johannesburg city bowl, is split between mattress and base manufacturing.

Key mattress types across all of the brands manufactured at the mattress facility includes: glue, flange, pillow-top, box pillow top and pamper top variants, those in turn matched to sprung, 240 and 280 bases, the latter numerical designations referring to the height of the base.

The timber supply chain that feeds into the BGSP base manufacturing facility, incidentally also starts at the mattress assembly end of the total process.

A lot adjacent to the mattress assembly plant serves as air-yard where the wet

off saw timber, procured from some 29 sawmills from across South Africa, is stacked, stickered and allowed to dry prior to its relocation to the base manufacturing plant.

And it's at this juncture that the pervasive influence of Don Emery, general site manager of the BGSP's base manufacturing plant is first detected. Emery's very specific approach to timber beneficiation, combined with a noteworthy career in timber bisect and direct the diverse processes that combine to allow for the volume output that exists BGSP base manufacturing plant on a daily basis.

A poignant example of this is Emery's distinct background in structural timber, this in turn used to inform on the requisite load factors required to secure the proper performance of a base-set.

Emery, a Saasveld graduate of the class of 1967/68 and a sawmiller of note with extensive experience across industry, has the air-yard configuration pinned down to a tee. From the insistence on precisely machined stickers, through to pristine stacking procedures that allows for almost no bow and only the occasional sweep, Emery's influence is undeniable.



An innovative way to ensure the correct placement of stickers in stacks of manufactured componentry going to BSPG's Cape Town division

If it's borne in mind that the timber component that forms part of the base manufacturing operation comprises a mix of *Pinus elliotti*, *P. patula*, *P. taeda* and *Eucalyptus grandis*, it's even more of a pundit that the air-yard has the success rate that it has. Pinus drying rates might concur in general but that of gum is totally different. To allow for a synchronised output from the air-yard given the species mix, is testimony to Emery's drying acumen.

Commenting on the need for the air-yard, Emery comments that it serves as a buffer zone that negates the lag that can occur when stocks are low and production needs to continue. "It takes the sting out of demand supply differences," Emery affirms. "It also functions in tandem with timber warehousing at the production plant itself, this facility providing for stockholding of kiln dried material in the event of wet weather preventing timber intake from the air-yard," Emery continues.

The timber grade coming into the base manufacturing plant – wet off saw grade one – is situated midway between industrial and crating grades. "This grade allows us to tap into raw material supplies from sides with maximum material availability the result," Emery says.

Quizzed on why pine and gum are married in the same product, Emery responded that it's simply a case of raw material availability. "The base, other than its functional purpose, combined with the need for tensile strength,



BSPG testing facility where bedding products are tested to ensure compliancy with international standards

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From page 52:**Sealy celebration underscores local timber innovation**

doesn't have any aesthetic requirements and the mix in species therefore goes undetected. It's simply that it allows us access to increased raw material," Emery says.

The mix in species does provide for manufacturing specific peculiarities, Emery admits, one being the different movement rates of pine and gum while in service.

This is countered by the addition of a citrus grade corrugated cardboard layer that neutralises this while also providing for a flat surface on which the mattress rests. The wax layer also provides for a measure of water resistance, this in turn aiding the general durability of the base.

Material optimisation

An important tool utilised by BGSP's base manufacturing division to defend its margins and ensure competitiveness in a tightly contested segment of the market is material optimisation.



CNC mediated material slitting with backing and stitching also being added to allow for capping that is added to the side of the mattress



Piping going onto the almost complete mattress

Examples of this are found in the company's corner block innovations, its finger-jointing line, the use of planed rejects in downstream processing and post-manufacturing residue beneficiation.

The corner blocks, a Don Emery design and patented component, renders the use of traditional corner blocks, machined 75 x 75 mm timber, obsolete. The newly innovated plastic corner block is engineered to receive the loose ends of the two boards that eventually combine to provide for the square base shape. The loose ends, once slipped into the corner block, are simply stapled into position to provide for neat, splinter-free and secure corner without the material and machining costs associated with the previous corner unit.

The Nukor-supplied Grecon finger-joint line comprises a material staging and in-feed unit, two squaring and finger-joint cutter units that also includes glue application followed by a material assembly bench and a press table, this in total allowing for a material recovery rate of between eight and 16 m³/d depending on requirements.

"Although sawmills grade material, our own grading processes intercept below standard pieces. These are upgrading with all defects removed with the recovered piece then planed all round (PAR) before arriving for finger-jointing.

"The investment in the finger-jointing facility was also heavily influenced by the need to optimise BGSP's logistical supply chains. The ability to finger-joint has meant that 60 less timber truckloads per year were required given the ability to upgrade through finger-jointing. This necessitated the building of a stress grade machine to quality control each and every individual length that is finger-jointery," Emery says.

The role of planed rejects in BGSP optimisation involves the grading of manufactured componentry with the items that are below par diverted back to the componentry machining section where remachining is done to allow for alternative components such as cornerblocks and the like.

The requirement to optimise post-manufacturing residue was again predicated on the need to optimise an available resource to derive increased value from it.

Previously, non-beneficiated residue realised marginal prices as it reached the end-user in offcut form which necessitated the end-user to flake the offcuts before it could be used in for instance board production processes. The acquisition by BGSP of a Weima shredder allowed for shredded material which end-users were prepared to pay a premium for given that it obviated processing phases on their side while also allowing for expedited production.

Manufacturing process

The manufacturing process at BGSP base manufacturing division is relatively simple with a limited number of processing phases required to produce the output.

Material intake is collated with grading and crosscutting, crosscutting duplicating to allow for material sizing and the



The Bravo Sleep Products Group's manufacturing headquarters located in Industria west of the Johannesburg city bowl

removal of defects that were pinpointed during grading. Crosscut ability is provided for by upcut crosscut saws. Non-grade compliant upgraded pieces are redirected to finger-jointing while grade compliant material, once sized, pass through to planing and profiling.

In lieu of the fact that the crosscut phase is quicker than the planing/profiling phase, a whip-yard serves as temporary way station, which material sizing fills before planing and profiling commences.

The heart of the base manufacturing process is resident in the five Weing Unimat 500 moulders that provides for planing and profiling ability. Albeit that the bulk of the pieces that pass through Weing's are simply planed all-round, corner profiling

is also applied to outward-facing base components. The rounded corners removes the risk of sharp corners that could possibly cause injury or damage the fabric that covers the base.

Assembly lines are preferred to discrete assembly units, the former allowing for increased assembly speed and flexibility, two vital ingredients in this high volume production environment. Assembly speed is further augmented by jigs, the slots on the jig simply filled with the correct component prior to final fixing being done.

As a result of the BGSP base assembly plant in Industria formerly serving as central assembly and distribution hub to Cape Town and Durban, logistical inefficiencies resulted from assembled bases being shipped to the other centra. To rectify this, Industria now serves as the manufacturing hub of the base componentry that are then flatpacked and forwarded to the national destinations mentioned.

Final take

A massively well-organised process, BGSP base manufacturing site is closely collated with the mattress manufacturing production processes situated adjacent to it.

A remarkable exercise in raw material procurement, processing and assembly, it serves as only a tiny adjunct of the total process that eventually provides for the final product that arrives at the end-user doorstep.

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Weima's new briquette press adds to bottom line

The newly developed Weima E80 briquette press is specifically designed to suit the requirements of smaller wood processing companies that typically can't afford briquette manufacturing capacity or don't have the residue volumes available to justify such an expense. They also tend to dispense manufacturing residue in landfills or sell it cheaply.

The additional value that can be added to post-production residue through briquette manufacturing plus its obvious use as renewable fuel both internally or as a commodity sold to end-users, re-emphasises the fact that production residue can no longer be viewed as waste that can be trashed without any further thought.

The E80 provides for a number of refined yet practical features that extends its utility value while also making it robust and easy to use.

A high-performance pressing mechanism with stabile, low wear claws and a pre-compressing unit with a cushioned end stroke pneumatic cylinder is an example of this. The briquette manufacturing process is controlled through a PLC control system that's typically only found on larger briquette machines. The E80 can also be specked to include an on/off monitoring system that allows for fully automatic use that makes it easy to use.

The output of the E80 is approximately 40 kg/h, making it ideal for the residue volumes that typically become available after the production runs of smaller companies.

In principle, wood with a residual moisture content of less than 18% can be briquetted.

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The Weima E80 briquette press



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Jimilo Kitchens and Hardwood Specialists open doors in Margate

Jimilo Kitchens in Margate on the South Coast opened its doors recently.



The entrance to Jimilo Kitchens and Hardwood Specialists

The company, also known as Jimilo Construction was founded in May 2006. Members Leon Ackerman and Gregory James, have over 30 years of experience in the building and construction development industry.

With the building trade affected over the past two years due to the recession, Jimilo only increased their capacity, and with excellent management skills ensured that they continued to upgrade all their factories and plant equipment. Instead of freezing up, the partners continued to stay positive and focused on the work at hand and continued to generate new projects.

With many woodworking manufactures struggling to survive, Jimillo secured top people to drive the latest addition to the company. Jimillo will manufacture solid hardwood kitchens,



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Robland panelsaw

and supply all the hardwood flooring, skirting and finishes to the new multimillion rand project that has been awarded. The factory manager Douw Steyn will lead the charge in producing and supplying these high quality products. Steyn has many years' experience in driving projects in the woodworking industry, and works in factories specialising in solid wood production.

On the initial meeting with the CMC Group sales manager Cecil Schickerling, and general manager Deon Olivier, it was refreshing to deal and supply equipment to clients that knew exactly what they need to produce and had all their business plans, with production requirements in place. Ackerman also mentioned that they are going all out to be able to supply high quality solid wood products and some pine products, that they are already supplying for the local and export market. Schickerling added, that the entire project from start to finish, which included the new factory premises, was erected, machinery supplied and commissioned in a four-week window. Jimillo certainly impressed as their entire factory in Margate was constructed using structural timber, and high quality finishing. The directors also supported high speed machinery,

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A view of a section of the factory floor

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The third new range is the blower purge dryer BD 100⁺-300⁺; built for energy-efficiency and endurance. By using heated ambient air for regeneration, this dryer range keeps the energy cost minimal.

A desiccant air dryer protects your production, equipment and the quality of the end-product by using desiccants to absorb moisture from the compressed air. These three new desiccant air dryer ranges are suitable for the most demanding industries and applications like electronics, food and beverage, pharmaceuticals, oil and gas, etc.



These were designed for efficiency with low pressure drops and delayed dryer cycles

Superior energy-efficiency

The new CD⁺-BD⁺ series are kind to your energy consumption and carbon footprint by minimising pressure drops and optimising the regeneration cycle.

The pressure dewpoint sensor measures the remaining humidity in the compressed air, detects when the active tower is completely saturated and then switches the functions of the two dryer towers at the optimal moment. Thanks to the Dewpoint Dependent Switching dryer cycles are delayed, resulting in energy savings up to 90% compared to more traditional switching systems.

The CD⁺ dryers use some of the dried air to regenerate its towers, whereas the BD⁺ mainly uses ambient air to dry its desiccant. Since the CD⁺ does not use ambient air, it is also suitable for hazardous conditions. On the other hand, the BD⁺ blower purge technology allows to downsize both the BD⁺ desiccant dryer and the compressor compared to a similar installation with the CD⁺ range;

resulting in major energy savings.

MN

From page 59:

Jimilo Kitchens and Hardwood Specialists opens doors in Margate

and high speed moulding machines, including the leadermac platinum range and a specialised cb 1100 widebelt sander was included. They also stuck to some traditional machines and equipped the factory with CKM surfacers, thicknessers, and also some machinery from CMC Smartek range, which included edgesanders, spindles, single end tenoners, and a variety of specialised machinery to enable them to produce and be equipped to handle all the required products, and more.

The need to be versatile also to be able to supply kitchen carcasses and a variety of board products, Jimillo members opted for the Robland panelsaw, which has proven itself over the last 40 years as the best precision cutting machine on the planet, in terms of reliability and performance.

Jimillo also opted to equip the factory with the full range of dusts extraction from the CMC Group, in order to recycle these into new products. They strive not to waste any timber used, and all waste will have a purpose during the production cycle.

As members of the Wood Foundation, the CMC Group supports all new ventures to stimulate and grow the timber utilisation, on the planet, and create positive growth in the natural resource structure in southern Africa.

With Jimillo geared up to do just that, we salute all our clients that make a positive contribution to protect and secure a greener life for our families.

In conclusion Shickerling says, "The CMC Group would like to thank the Jimillo members for all their support, and confidence and ensure them of our full support and service, on their new venture."

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Place the Kreg screw into the deck jig collet and drive the screw in

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2010 NHLA annual convention and exhibit showcase exceeds expectations

The 2010 National Hardwood Lumber Association Annual Convention & Exhibit Showcase, presented by Lumbermen's Underwriting Alliance, was held in October in Vancouver.

With 743 registered attendees, an approximate 15% increase in attendance over the 2009 conference in Boston; and a sold out Exhibit Showcase & Trader's Alley featuring 65 exhibiting companies. This year's annual convention exceeded all expectations and proved once again to be the premier networking and educational conference of the hardwood industry.

"The 2010 NHLA Annual Convention again brought together the hardwood industry from around the world to confront directly some of the issues the industry is facing. NHLA was especially pleased to serve as host for a number of other hardwood association meetings held in conjunction with our annual convention. This year, the NHLA Convention Planning Committee added expanded educational seminars and events outside of the hotel to keep attendees engaged during the entire four-day meeting," reported Mark Barford, NHLA executive director. "By all measures, the convention was a great success!"



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Wood SA & Timber Times

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HARDWOODS

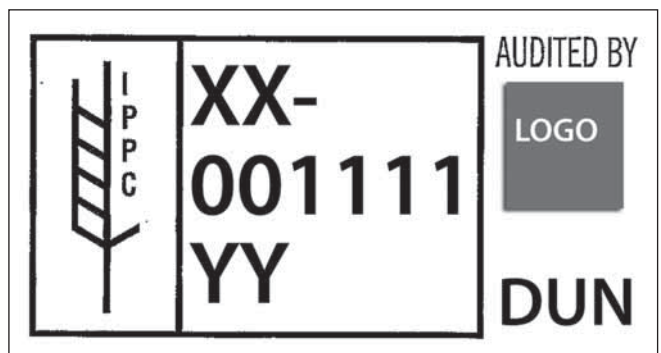
Wood protection crucial to continue meeting global needs

Wood is used to build, furnish our homes or offices and plays a pivotal support role within various industries such as agriculture, packaging, transport and construction.

Given the demand it is no surprise that our natural wood plantations are trapped in a tug-of-war between the increased global consumption of wood, the demand for conserving natural forests and sustainable utilisation, leaving us an unsolved conundrum. How do we keep up the supply of durable hard wood without leaving our natural forests barren?

Through wood protection we will be able to use our current sources in a sustainable manner, narrowing the gap. Wood protection also protects wood and wood-based products against biological and non-biological factors such as pests, decay fungi, mould and weather conditions. Pests pose the greatest risk for wood and the increased movement of goods in international trade has allowed wood-based pests and pathogens to cross the oceans as easily as we do.

"The influx of untreated wood is a widespread problem which continues to grow for two reasons; firstly the import of curios and artefacts from India, Asia and Africa and secondly the increasing popularity of using wood in construction and features in and around the house, such as decking chairs, bars and flooring" said Mark Enslin, President of the South African Pest Control Association (SAPCA).



The IPPC stamp is to certify that the wood packaging material that bears the mark has been subjected to an approved treatment measure

The density of hardwoods make it impossible to treat with a residual wood preservative, which means that the presence of latent infestation of egg or larvae in the sawn timber can cause structural or aesthetical damage to the timber months or years after use.

According to Enslin there have been many examples of such problems resulting from an infestation in imported timber. In a recent incident a shipment of timber imported for the construction of wooden window and door frames were detained by customs. "These timbers needed to be treated prior to release to the importers," said Enslin.

The most common methods are to impregnate the wood with preservatives that protect wood against fungal decay and wood-based pests. This treatment makes the wood toxic to those organisms who feed on it. Natural treatment methods include heat treatments. "The treatment method is determined by the reason for the treatment, such as infested wood, export or as a precaution," says Anton Pretorius from Rentokil's Fumigation department.

The only way of treating hardwoods is by fumigation with Sulphuryl Floride or Methyl Bromide. The use of MB is limited by the Montreal Protocol which states that Methyl Bromide should be phased in developed countries by 2010 and 2015 in developing countries.

"The problem with fumigation using either of these products is that there is no residual effect or lasting protection and the results are dependent on the integrity of the fumigation process related to the concentration of gas over a given exposure period," says Enslin.

The CT-factor as it is known in the industry is often not achieved, due to poor fumigation practices, the net result being that the imported timber has latent infestations which in some cases can take several months or even years to manifest.

The most common insects associated with the use of untreated wood derive from the extensive family of beetles and termites originating from the more common groups Bostrichidae (Shot hole borer) and Lyctus Brunneus.

The risk of "new" species of wood destroying insects being imported into the country is ever present and the risk is that they find the local climate favourable to breed and spread. There is also the factor of people moving within the borders of South Africa spreading these wood destroying insects as they move.

"We have noticed an increase in termite activity within the Western Cape and have even found the occasional infestation

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From page 65:

Wood protection crucial to continue meeting global needs

of *Cryptotermes Brevis* (West Indian Dry Wood termite). This is largely due to climate change and conditions being more favourable for their development now than in the past," says Enslin.

The South African Pest Control Association (SAPCA) has the only recognised training programme for the qualification of what is commonly known as beetle inspectors. Only individuals that have completed this training programme and are in the possession of a SAPCA registration certificate are suitably qualified to undertake inspections and recommend treatments for infestations by wood destroying organisms.

In South Africa, the Consumer Affairs Act (Unfair Business Practice) Act 1988 defines treated timber as all timber that has been preserved with the intention of protecting the timber against timber destroying factors or agents and states that the timber must carry a product certification mark (SABS or SATAS) to show that this has been done properly. The Act then refers to "South African National Standards (SANS 10005) – The Preservative Treatment of Timber", which outlines the types of preservative products used as well as municipal areas that have to use treated timber.



Structural damage to untreated wood

According to the National Building Regulations also outline the requirements for the use of treated timber in building structures – these state that "timber materials used shall be treated according to SANS 10005". Local building authorities may require proof that this treating has been done.

This requirement is also reinforced through the National Home Builders Registration Council's Home Builders Manual which states that all timber used in a building should comply with the requirements of SANS 10005.

When it comes to the export and import of wood the ISPM15 (International Standards For Phytosanitary Measures No 15) standard developed by the International Plant Protection Convention (IPPC) and regulated by the national Department of Agriculture through the South African National Plant Protection Organization (SA NPPO) regulates the treatment of wood materials with a thickness of 6 mm and bigger. Its main purpose is to prevent the international transport and spread of disease and insects that could negatively affect plants or ecosystems.

ISPM 15 affects all wood packaging material (pallets and crates) requiring that they be debarked (DB) and then heat treated or fumigated with Methyl Bromide (MB) and stamped or branded, with a mark of compliance better known in the wood protection industry as the "wheat stamp". Wood panel products such as hardboard and plywood are exempted from ISPM15.

At the end of the process, the fumigator provides the company seeking approval to use the MB or DB-MB marks, with a fully completed Certificate of Completion of Fumigation certifying that the treatment has been carried out to the requirements specified.

If wood or wood-based products are exported into countries that have implemented ISPM 15 and are not marked appropriately or show signs of infestation then the importing country may take action such as ordering the wood to be treated or disposed of or the consignment may be refused entry. The shipper will be liable for all of these costs.

In the absence of laws pertaining to the registration of inspectors and the extent of the proliferation of unqualified inspectors, SAPCA has embarked on a course to close the loopholes and expose unqualified inspectors and companies.

In recognition of the coming Consumer Protection Act, some of the measures that will be introduced by SAPCA early in 2011 will be an annual registration process for ALL inspectors whether they are members of the association or not; a national standard inspection reporting format that will be easy for the lay person to understand and a SAPCA Clearance Certificate and or Certificate of Treatment that will be backed by a fidelity fund. These certificates will only be available to individuals or companies that are registered and have met the qualification criteria.

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What's in the pipeline for timber flooring?

By 2009, US demand for laminate flooring was already predicted to overtake hardwood, surpassing the long-time favourite by a score of 171 870 624 million m² to 13 340 000 m².

According to the Freedonia Group, which conducted the Hard Surface Flooring study, laminate flooring demand is forecast to grow 15% per year, compared to an annual growth rate in demand of 4,8% for hardwood flooring.

2014 projections also show laminate flooring outpacing hardwood flooring, with demand at 274 063 968 million m² compared to hardwood's 167 225 472 m².

Demand includes domestic as well as imported products.

According to Freedonia analyst Tonia Ferrell, the increased demand for laminate flooring can be attributed to its growing familiarity with consumers and builders, the cost of hardwood and improved performance properties, including stain and fade resistance.

Increased style options are another driver of laminate flooring's popularity. With improvements in technology, such as embossed registration and texturing, laminate flooring can provide consumers with a cost-effective method for achieving the look of tiles, ceramics and woodgrains, Ferrell added.

Hardwood shows gains

Although laminate flooring can mimic the look of hardwood, most high-end residential and commercial applications still prefer 'the real thing,' Ferrell said. According to findings by Freedonia, this will help drive hardwood flooring demand's steady growth rate of 4,8 percent annually, through 2009 and into the future.



A new take on parquet flooring

Currently, hardwood flooring holds the biggest share of the non-resilient flooring market, which also includes laminate flooring, ceramic tile, natural stone, bamboo, and glass flooring. Hardwood flooring accounted for 42% of shipments, by area, in 2004, compared to laminate flooring's 25%, according to Freedonia.

The growth of both the hardwood and laminate flooring segments comes primarily at the expense of carpet and vinyl, Ferrell said, and is being driven by consumers' preferences for high-end, environmentally-responsible products in their homes.

The growth in shipments for both laminate and hardwood flooring reflects this trend.

According to Freedonia, wood flooring shipments, using the 2004 number (92 903 040 million m²) as base, will grow to 130,064,256 m² by 2014.

Likewise, shipments of laminate flooring will grow measurably, from 53 419 248 million m² in 2004, to 111 483 648 m² in 2009, when it will draw even with hardwood flooring, according to Freedonia. By 2014, laminate flooring shipments will leap past hardwood shipments, to 176,515 776 m², Freedonia said.



Hand distressed oak flooring has gained in popularity. Machined distressed flooring has meant reduced costs



Bamboo, a member of the grass family, is set to gain in popularity as a flooring medium as green issues continue to influence buying decisions

Overall Market Trends

The residential market continues to be the primary application for hardwood and laminate flooring, Ferrell said. However, she noted, "New [residential] construction is expected to weaken on the back of the global slowdown although it is still going to be healthy, but demand will be restrained from that."

A surging remodeling market, along with a burgeoning non-residential construction market, will compensate for any decline, she added.

"The [overall] increase in construction, has benefited both hardwood and laminate flooring," said Bill Dearing, president of the North American Laminate Flooring Assn. and manager of market development for Pergo.

"Although hardwood flooring has seen the benefit quicker because it is more entrenched with builders and the community at large is more familiar with it – I know, personally, that the laminate building business has been increasing dramatically," Dearing added.

Dearing's observation concurs with findings by Freedonia, which also projects growth – albeit a more moderate pace – for both laminate and hardwood flooring products in non-residential markets.

Why choose bamboo?

Bamboo is also increasingly used as flooring medium. Some of the benefits associated with bamboo include:

- Bamboo flooring has been used for centuries in Asia because of its beauty, hardness, durability and environmental friendliness.
- Bamboo is the most environmentally friendly flooring available.
- Bamboo is a sustainable, fast-growing grass that offers an alternative to the world's limited supply of hardwood.
- Recognised as the fastest-growing plant on earth, bamboo offers 25 times the yield of hardwood, yet is much more sustainable and renewable.
- Bamboo can be harvested without killing the plant and replenished with virtually no impact to the environment.

- Bamboo is such a hardy plant that it requires no pesticides or fertilisers.

There are two primary colours of bamboo flooring to choose from:

1. Natural Blonde, which reflects bamboo's true colour, along with its beautiful grain, growth patterns and joints, or
2. Smoked/carbonised bamboo, which is a darker, amber tone, this dark, rich colour is achieved by a smoking process. When bamboo is carbonised, it takes on a darker, caramel or amber tone throughout. With new staining techniques, more colours are being added to the range.

Bamboo flooring is manufactured in both a horizontal-grain with the characteristic nodes visible or in a vertical grain that produces an even colouring and grain. The final product is also available in door and window mouldings, parquet flooring strips, wall panels and stairway treads.

The benefits of bamboo flooring:

- Same design appeal as hardwood flooring.
- Harder than oak and maple.
- Durable.
- Environmentally friendly.
- Caring for bamboo floors is easy – bamboo requires you to run a mop or vacuum over it twice a week and maybe use a little mild detergent and non-abrasive cleaners. EN

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17446 Wood 08/2010

Sawfla and the flooring industry

Interest in the use of traditional wood floors and the newer generation laminate flooring in commercial and domestic buildings, prompted responsible local concerns to form a body representative of the industry.

The Southern African Wood and Laminate Flooring Association (Sawfla) was formed in November 1998. Its aims were to develop an awareness of the potential of wood and laminate flooring, and to address the needs of both the local industry and that of the consumer.

This initiative is in line with comparative organisations throughout the world. Many of which have been active for a considerable length of time. Thus, many current European norms such as those published by the EPLF (European Producers of Laminate Flooring) are endorsed and applied together with South African standards (SANS10043) tailored for the South African situation.

Accreditation of installers

Full SAWLFA installation accreditation is available to installer members. On successful completion of the SAWLFA installation training modules, installation teams will receive a certificate to this effect. This provides clients with the knowledge and peace of mind that installations are being carried out in accordance with product specifications.

The Sawfla mission

- All products conform to strict European and South African standards.
- Protection of the public through the establishment of industry standards.
- Installations are performed according to SANS 10043.

To be achieved by

- Providing a unified voice for the industry.
- Setting and maintaining industry standards through:

The completion of Codes of Practice in conjunction with recognised international and local authorities. These include Standards SA and the Building Technology Division of the CSIR.

Accreditation of installers of wood and laminate flooring:

- No installer member is listed without going through accreditation.
- Establishment of guidelines and material for training and education of industry participants.
- Playing an advisory role and providing impartial opinions to resolve problems and disputes.
- Providing a central advisory forum for technical matters.

Benefits for the consumer

Access to accredited suppliers and installers of reliable flooring products.

- All corporate members have certificates to show they comply with either EN13329 or EPLF standards.
- Advice on correct product quality selection.
- Information on local and international specifications and standards.

If problems are experienced after a member has installed a

floor, the Association can be approached to conduct a thorough technical evaluation and provide an unbiased opinion; members are expected to abide by the findings. All members ascribe to the Sawfla code of Ethical Practice, which requires them to maintain the highest standards of honesty and integrity towards their clients.

Only use companies that are members of the South African Wood and Laminate Flooring Association because:

- All products conform to strict European and South African standards.
- Protection through objective evaluations and unbiased opinions.
- Installations are performed according to SANS 10043.

For a complete list of our members visit our website at www.sawfla.co.za or contact us on 011 455 2822.

EN



Profile Timbers and TimberMax – retail and manufacturing united

The profiling expertise of Profile Timbers combined with the hardwood flooring and decking retail acumen of TimberMax, allows for distinct advantages in a heavily contested segment of the market.

Meeting Allan Day, managing member of Profile Timbers, he initially refers to his long and noteworthy career in the timber industry to explain both the close ties between Profile Timbers and TimberMax.

Allan's initial introduction to timber came in the form of a cabinet making apprenticeship at SA Timber and Joinery in 1979. This inauspicious start was soon relegated to history as Day's rapid progress through the ranks saw him being appointed as operations manager for the PG Group, a position he occupied for a decade.

A stint as director of both the PG Group and Interwil saw further experience being added to his already formidable portfolio. His stay at Nick Lourens Agencies (NLA) introduced him to the intricacies of timber procurement while a stint at Randfontein Saligna Beams (RSB) fast-tracked his lamination expertise.

At that stage, TimberMax functioned as the flooring and decking subsidiary of RSB. The decision by RSB's then owner, Max Carter, to hive off TimberMax to interested buyers, saw Allan Day and his son-in-law, Tino de Sousa, put in a bid to buy TimberMax, which they also then did.

In the interim, a further part of the PG Group, PG Timbers, also came up for sale. George Foulds, buyer of PG's stake in the company, which at that stage did all of PG's solid wood profiling, transformed it into Profile Timbers.

A further change of ownership saw Hennie Uys acquire Profile Timbers.

Allan Day's decision to purchase the company when it came up for sale again put all the pieces in place that would eventually allow for the customised profiling skills of Profile Timbers to meld seamlessly with the retail savvy of flooring and decking specialist TimberMax.

The outcome of this formal partnership provides the Profile Timbers – TimberMax partnership with the unique ability to manufacture and procure timber flooring and decking and associated products to allow for a customised market offering that is rivalled by only a few other producers locally.

Allan Day's former association with NLA has also meant that in addition to NLA serving as timber procurement agency for some of Profile Timbers' solid material intake, NLA also has an exclusive license agreement with TimberMax which sees all of

NLA's imported premachined flooring and decking components being distributed exclusively by TimberMax.

This association goes even further in the form of one of the most recent innovations to hit the South African decking market – composite decking components.

NLA's composite decking imports are also distributed exclusively through TimberMax, Allan Day becoming quite vocal when he describes the quality of locally manufactured composite componentry. "The quality of the local product is

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Karri decking exiting Profile Timbers' Alberton-based production site



A complete decking order awaiting collection. Note the laminated balustrading, that again resulting from Allan Day's stay at RSB is laminated with Kleibert PUR 501 adhesive, sourced from A Huster Machine Tool Company

From page 71:

Profile Timbers and TimberMax – retail and manufacturing united

disappointing and as a result, Profile Timbers, TimberMax and NLA decided to go the import route in order for the end-user to be assured of the best quality going into an installation when composites are used," Day says.

The synchronised play between various role-players and the manner in which it combines to provide for an increased service offer to the end-user, finds further relevancy in TimberMax's collation of all activities related to sub-contractors tasked with flooring and decking installations.

"That's the sole preserve of Tino," Allan Day says, describing de Sousa, TimberMax's managing member as ostensibly one of the leading lights in the local flooring and decking industry.

This partnering approach also finds relevancy in the informal association between TimberMax and Zimbo's Trading, the latter a crackerjack flooring outfit based in the Western Cape but with a national footprint. In addition to flooring and decking, Zimbo's is also the national distributor of various internationally recognised flooring and decking products, one of which is the Loba range of sealants and oils. Through the TimberMax/Zimbo's association, Loba has also become of the flooring and decking coating of choice recommended by both Profile Timbers and TimberMax when advising on maintenance schedules for both in and outdoor applications.

A further development has seen TimberMax open a branch in Namibia, this in turn aimed at getting access to the small yet very lucrative Namibian that hasn't had much variety in terms of flooring to date.



Part of Profile Timbers' moulding capacity, a IWM five-head moulder supplied by GF Potgieter Woodworking Machinery



Two Barberan profile wrap platforms provide for Profile Timbers' foil upgrading capacity

Specialist profiling the name of the game

The competitive advantage brought to the table by Profile Timbers is firstly that it allows for specialist, small volume, highly customised profiling ability that in addition to flooring and decking, also provides for the ancillary items typically associated with flooring and decking.

This includes skirtings, architraves, dado rails, cornicing, handrails, balustrading, treads, ceilings and panelling to name a few.

This essentially means that specifiers, architects or end-users can order one-of-a-kind specialist profiling, which can then be augmented with further profiled items if so required. The sum total is a unique aesthetic that is difficult to rival by competitors as

they're reliant on outsourced manufacturing or even imports which all add to the final costs.

Solid flooring can also be matched with profiled items that received identical profiling, which in turn were machined from a specific batch of a given specie, which means no colour variation.

Profile Timbers' second advantage lies in the flexibility brought to the table through its discrete manufacturing process. Discrete manufacturing refers specifically to its ability to produce customised profiling, upgrade, package and deliver the product without the need to resort to outside service providers to deliver the end-product.

This one-stop shop ability, further augmented by TimberMax's retail focus, means that the end-user has access to unique possibilities without having to necessarily pay more for it. This flexibility also affords the end-user the



A lucrative sideline – brush handles



Charge sticks with brass collars

The charge sticks are yet again a further interesting output. The charge sticks, manufactured from Meranti, are used by the mining industry to push explosive charges into the holes in the rock face once the holes have been drilled.

In addition to being profiled into 22, 25, 28, 30, 32, 38, and 50 mm diameters, the 50 mm charge sticks can also be supplied with the 50 mm brass reinforcing rings on either or both ends. This is done to prevent wear and minimise the risk of sparks given the proximity of high explosives.

Final take

Solid wood flooring and decking manufactures locally is thinly spread. They're a rare find and should all receive a pat on the back for being able to contend with the deluge of cheap imports that flood the South African market, all under the banner of being cheap, but ultimately being expensive given the lack of flexibility that the route offers and the dire impact that it has on the local job market.

What's also impressive in the Profile Timbers/TimberMax value chain is the distinct attention to providing for a total solution in decking, flooring and general profiling.

This includes suave retailing, design inputs, added to by manufacturing, installation and even maintenance.

An interesting partnership to note for future reference.

EN

ability to change and adapt ideas without having to be range-bound.

TimberMax's retail service includes dedicated outsourced installation teams that are contracted in by the company to assist with installations.

Manufacturing clout

The heart of Profile Timbers' processing capacity lies in its set of four moulders, two IWM five-head, one Leadermac Compact 723 eight-head, and one dated yet extremely reliable Weinig four-head moulder. These are used to PAR and profile the componentry that exits it's the Profile Timbers production site on a daily basis.

A double-end tenoner assists with the end-matching of the solid flooring produced with T&G added obviously coming from the moulders.

Two Barberan profile wrap platforms allows for the profiled MDF componentry that are upgraded with foiling, this allowing Profile Timbers the ability to run out various finishes, whether plain or grain patterning.

The typical split, according to Allan Day between MDF and solids stands at 20% MDF and the remainder solids with solids again split into 20% Meranti and the rest evenly spread across exotics and pine.

Main suppliers of Profile Timber's solid material intake are NLA, FG Hoffmann, Numill, Interwil and Tegn Timbers to mention a few.

An interesting and very lucrative sidebar to the main income stream of Profile Timbers is its brush handles and charge stick contracts that add handsomely to the bottom line.

The brush handles, all machined from pine, go onto a variety of end products widely used by consumers nationally and in the region. Shoe brush handles and the erasers used by teachers to dust chalkboards constitute the bulk of the output in this regard.

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17879 Wood 10/2010

Impi Teak builds on its outsourcing model

Discarding discrete manufacturing in favour of an outsourced approach plus the extreme durability of teak, sees Impi Teak continuing to gain market share, the rich hues of Zimbabwean Teak, Impi's timber of choice for its total output, adding further allure to its market offer.

The common notion in manufacturing is to lump all processing phases required together under one roof with the simple logic that drives this being that consolidation reduces costs, increases control over output and ultimately aids with increased competitiveness. Keeping logistical lines short is in brief what appeals most about such an approach.

Albeit that this wisdom lies at the heart of much of what constitutes manufacturing at present, there is another, growing school that maintains that it's more cost-effective to retain control over core functions but farm out peripheral functions to outside specialists. The net effect of this is a leaner, more streamlined and cost-effective process where reduced costs during manufacturing are eventually



Tongue and groove flooring with sapwood adding further variation to heartwood grains



Contemporary design combined with the resilience of teak to provide for superlative results

passed on to the end-user. The intended outcome of this is to ensure ongoing customer loyalty, the dual offer of manufacturing quality at a reasonable price inspiring this. In this scenario, businesses become enablers in a network of separate but cooperative business ventures, the strength of each combining to provide for the resilience of the whole.

The more than 60 years of manufacturing experience shared between Graham McCormac and Klaus Kühn, business partners at Impi Teak, convinced them that an outsourced manufacturing approach held the most benefit. A further significant decision in part tied to this was to opt for a single specie that would serve as the basis for all of the products coming out of the Impi stable. The choice in this regard fell on Zimbabwean Teak.

"Being a business in Africa, trading to a large extent with Africa, having a local timber resource available with such magnificent qualities as Zimbabwean Teak and being surrounded by seasoned craftsmen who

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EXTERIOR ARMADEK

PRODUCT SPECIFICATION:

Timbacare "Armadek" is a superior quality WATER-BASED protective sealer specially designed to protect and beautify outdoor wooden decks and furniture, but can be used on any outdoor timber. **Armadek** forms a tough wear-resistant coating on the timber surface and contains special agents to prevent dry-rot, surface attack from insects and fungus and offers good protection against the harsh UV rays of the sun. It is not a varnish and therefore will not flake or peel if applied to clean, dry surfaces. The product is quick-drying, easy to apply and low in odour, and available in 6 translucent shades, clear, oregon, brown, mahogany, rosewood and imbuia. (Note: For the best UV protection one of the tinted shades is recommended).

EXTERIOR SEALER

PRODUCT SPECIFICATION:

Timbacare "Exterior Sealer" is recommended for use on all exterior woodwork likely to be directly or indirectly exposed to weather and strong sunlight. **Exterior Sealer** penetrates the wood cells and contains special agents to prevent dry rot, surface insect and fungal attack and has exceptional protection against the harsh UV rays of the sun. It is not a varnish and therefore does not flake or peel if applied to clean, dry surfaces in the correct manner. Available in 6 translucent shades; clear, natural/light yellow, oak, mahogany, teak and ebony. (Note: For the best UV protection one of the tinted shades is recommended).

COATING INSTRUCTIONS:

Stir thoroughly before use to prevent settling out of drying and protective agents. Ensure timber is clean and dry before coating.

New timber: Apply 3 coats without dilution. (First coat – primer coat, second coat – under coat, and third coat – finishing coat). On all horizontal surfaces an additional coat is recommended. Allow the recommended drying time between coats (at least 2 hours for **Armadek** & 6 – 8 hours for **Sealer**, preferably overnight in cold conditions). Drying time can be affected by conditions such as weather, and type of wood species and surface.

Do not coat in damp conditions!

For best results apply an additional coat within first 12 months. Lightly sand using medium / fine grade sandpaper and thoroughly clean the surfaces before applying this coat. (Any resinous wood knots or areas subjected to bird droppings, oil spillages, etc, will require additional solvent cleaning).

Old or previously varnished timber: Remove all traces of coating by sanding and / or scraping prior to applying **RYSTIX Timbacare** as recommended for new timber mentioned above.

Where **RYSTIX Timbacare** has been previously used, simply lightly sand or rub down with sanding pads and clean as described above and apply two fresh un-diluted coats. (Rough or knotty areas may require extra sanding).

Caution: Insufficient application will reduce the level of protection and therefore the life of the coating. Ensure the coating is liberally applied to all end-grains.

Coverage: A three coat application will average approximately 10 - 12 square metres per litre per coat, depending on the density and porosity of the substrate.

Note: **RYSTIX Timbacare** can be applied to treated timber like water-borne CCA or oil-borne Creosote, providing the timber has been re-dried after treating, and any residue cleaned with mineral turpentine. Any external wood that is not treated or maintained, will weather, become unsightly, and eventually break down and develop splinters. Even the heartwood of any hardwood, when exposed to the external elements, is not expected to last more than 15 years if left unprotected. (Significantly, the sapwood areas of the hardwoods have no life span at all if not protected).

For further information on the care & maintenance of all your timber, consult our product section at www.rystix.co.za which includes the interior range or our superior coatings; namely Interior Coating – general purpose polyurethane; and **Interior Armafloor** – self cross linking acrylic emulsion water-based floor coating for amazing results and colour enhancing technology.

From page 74:

Impi Teak builds on its outsourcing model

understand how to process this beautiful but difficult timber, convinced us that Zimbabwean Teak was the way to go," says Graham McCormac.

"The decision to opt for African Teak also fitted in nicely with our lean approach towards business. Producing all of our product lines from teak allowed us to tool our marketing approach towards a uniquely African feel, the fact that South Africans are outdoor folk assisting us in positioning our products in a niche market that's rewarded us very nicely over the past 10 years that Impi's been around.

"Using one specie also meant that we could acquire specialist insight into how to procure, manufacture, install and treat Zimbabwean Teak – this in turn passed on to our service providers to ultimately aid in ensuring lifelong quality for our customers at a very reasonable price," Klaus Kühn confirms.

Impi's current output consists of flooring and decking, mouldings, colonial style furniture (including solid laminated tops), balustrading, solid treads and risers, customised doors and frames, laminated beams and objects de' art to mention a scant few. The flooring range, other than decking is split between T&G and end matched floorboards in varying lengths, widths and colours while parquet flooring also forms a significant part of the output coming from Impi.

The colonial style furnishing hints at a bygone, elegant age where sea chests, folding chairs and daybeds formed the bedrock of the contents of lodges scattered throughout



The quaint-essential character of Africa captured with solid laminated teak table tops, such tops, given its longevity, serving as an effective alternative to granite tops in kitchen applications

the continent, where time stood still and time for contemplation was aplenty.

The decking and related componentry created to provide for staircases and rises was a logical extension of the total service made available during the deck building process. The intention was to allow for an installation that is manufactured in its entirety from a single specie, this in turn providing for striking aesthetics while also imbuing the installation with the qualities most prized in Zimbabwean Teak – longevity and striking grains.

The customised door and frame building range also resulted from the need to provide for a turnkey installation service, where the tones, grains and feel of floors clad with teak could be continued through into mouldings, doors and the like. "It's remarkable to note how insistent our end-users are in ensuring a uniquely African feel that somehow invokes the spirit and feel of the continent," says Graham McCormac. "Impi's ability to continue this theme through a variety of products ultimately provides us with the competitive advantage that's hard to rival."

Dedicated procurement and craftsmen

Zimbabwean Teak grows in broad swathe across southern Africa, extending from east coast in Mozambique, through Zimbabwe, Zambia and into some parts of Angola in the west.

"Impi's timber procurement network is focused on Zimbabwe and Zambia at present," says Klaus Kühn. "These teams are well schooled to only harvest timber above a certain age, the need for sustainability being uppermost in this regard," he continues.



Extraction is primitive but effective. Only diameters above specified limits are harvested



Primary breakdown already reveals the beauty of teak



The beauty and longevity of teak flooring personified

Primary breakdown is done at bushmills, those in turn relying heavily on Wood-Mizer portable saws to accomplish the initial sizing.

Once done, the planking is transferred to processing sites throughout Zimbabwe where PAR and profiling is done.

"We eventually receive the end-product ready for installation, something which is heartening given reports that Zimbabwe's economy has come to a practical standstill. The fact that this sector is so vibrant hints well at the resilience of the Zimbabwean economy despite the unsettled nature of the country at present," Graham McCormac says.

"The remainder of our output comes from handpicked and seasoned veterans that were selected based on the quality of the specific products that they've elected to produce.

By allowing these craftsmen to do what they do best, we've really been very fortunate to receive the quality that our end-users want and have come to expect from us," McCormac continues.

"In terms of flooring installations, we again really on contracted-in installers, the expertise and knowledge that they've acquired over the years in working with teak allowing them to fit and finish the timber, something that not many installers are willing to commit to given the difficulties associated with working with teak. This reticence to work with teak has given us a niche market of sorts, this providing us with a niche market of sorts.

"The fact that we then add to the flooring with mouldings, laminated beams, balustrading, that we can extend it this out into exterior applications and the add the final touch with furniture and related items really gives us the cutting edge," McCormac concludes. EN



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IMPORTANT NOTE: THE PURCHASER MUST BE AWARE THAT THERE ARE ENCROACHMENTS OVER THE PROPERTY AND THAT HE/SHE WILL BECOME LIABLE FOR ALL THE LEGAL AND SAFETY REQUIREMENTS IN TERMS OF THE DAM LEGISLATION.

TIMBER SPECIFICATIONS		
<p>Genus: Acacia:- 0 to 1 yr Mearnsii 6.8ha 5 to 6 yr Mearnsii 4 ha 7 to 8 yr Mearnsii 9.8ha Genus: Eucalyptus:- 0 to 1 yr Smithii 47.8ha 0 to 1 yr Grands 57.7ha</p>	<p>0 to 1 yr Resinifera 10.4ha Genus: Eucalyptus:- 1 to 2 yr Grands 51.9ha 1 to 2 yr Macarthurii 10.4ha 2 to 3yr Grands 1.8ha 3 to 4yr Grands 15.8ha</p>	<p>5 to 6yr Smithii 52Ha Genus: Populus:- 10 to 11 yr Deltoides 4.1ha 11 to 12 yr Deltoides 11.3ha Genus: Syncarpha:- 0 to 1 yr Glomulifera 3.7ha</p>

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URGENT AUCTION OF HENLEY PLANTATION AND DAM

18313 Wood 01/2011

Bedson Timbers launches hardwood flooring showroom

Bedson Timbers new hardwood flooring showroom, set to go live in early 2011, provides a sophisticated marketing space that ultimately benefits the end-user.

Hardwood flooring samples, as a shorthand means to illustrate the ambience and style that wooden floor can bring to a room, rarely rivals the impact and glitz that an expansive, fully installed wooden floor allows for.

“The subtle blend between pattern, grain and colour somehow gels across an unrestrained space provided by the showroom really bringing to life what a beautiful wooden floor is all about. It also makes it possible to showcase what can be achieved with wooden flooring, while also providing room to introduce new and provocative flooring ideas to the end-user,” says the GM, Mr José Pereiras.

The showroom facility, located at Bedson Timbers’ Silverton locale, is set for official opening in early 2011, Pereiras says. The precise date will be announced through the media closer to the time.

“In the interim the showroom facility has already shown its worth in terms of the increased marketing opportunities that it affords Bedson while also accentuating the dramatic impact that wooden flooring can bring to a space.” The showroom facility melds a number of elements together to provide for the impact that Bedson sought when designing the exhibition space.

The sumptuous surfaces of the generously wide pine floor boards are counter-pointed by deliberately sparse and minimalist surrounds. The intention is clear. Flooring receives



The showroom brings flooring ideas to life with modern technology also roped in to widen the scope

centre attraction. The linear, leather clad seating again contrasts with the richly toned and variously patterned wall and pillar mounts that illustrate the variety that can be achieved with differently configured species and floorboard patterns.

“We wanted a sophisticated yet accessible space that allows architects, specifiers, installers and homeowners to imagine what can be achieved when timber is used as flooring medium. We also wanted to emphasise Bedsons approach to wooden flooring,” Pereiras continues. “We’re not a flooring wholesaler. Instead, we provide a total service that allows for distinct flooring solutions.”

Technology and sense combine

The conversation with Bedson Flooring & Décor Jose Pereiras, and Bedson Timbers staff, while including the functionalities afforded by the new showroom, also meander into international flooring trends and challenges, this in turn illustrating some of the further benefits afforded by the showroom.

“What also stood out from our research was that end-users are constantly asking for increased product diversity, whether it’s colours, finishes or the manner in which floor components are configured.

“It was clear that we had to marry the high-end, ‘quality’ end of timber with the more retail orientated elements that would allow for increased ability to demonstrate what can be achieved with wood.



The latest addition to Bedson Timbers’ already extensive timber processing, marketing and support structure includes a hardwood flooring showroom – this a view of the facility from the outside



The suave interior of Bedson Timbers' new hardwood flooring showroom facility

configured differently. This allows the end-user, in consultation with Bedsons to customise installations and meld it to the specifics of the space being clad."

Most importantly, Pereiras continues, "the showroom allows us the ability to interact with the end-user and adapt our ranges and output to their needs."

The search for increased flexibility is in turn based on Bedsons already well documented in-house flooring component manufacturing facility that allows the company to produce customised flooring instead of being range bound or limited by imports.

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"The showroom allows visitors to interact with the product, experience the ambience that is so distinctly part of wood while also being exposed to creative possibilities.

"Multimedia also serves to extend the choice and variety that are available with wooden floors. The showroom, accessible via the www.mesopotamia.co.za website, provides for online browsing capabilities, providing a full rundown of the range and extent of the Bedsons offer.

"The multimedia experience will be expanded further by software that allows Bedsons to generate on-screen renderings of a space that is clad in a variety of species and



Innovation in flooring on display



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Why wood?

When compared to products like concrete and steel, the production of wood products consumes far less energy, emits less greenhouse gases, releases less pollutants into the air and generates far less water pollution.

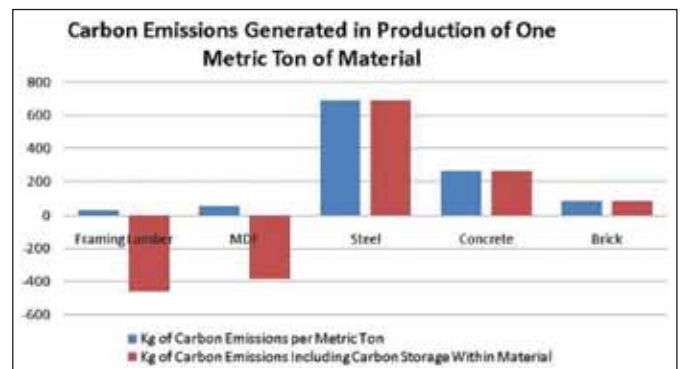
Trees also absorb carbon dioxide from the atmosphere, thus reducing greenhouse gases and improving air quality. Unlike most construction and decorative products, the properties inherent in wood, as a natural, sustainable, renewable and recyclable resource, make it a logical environmental choice for any project. Not to mention wood's desirable aesthetic characteristics which provide warmth and character and make it a natural choice in a multitude of design applications.

Part of understanding why wood is one of the most environmental building or interior design materials is to understand the carbon dioxide generation associated with wood itself. Clean, natural energy grows the trees that produce wood products. The growth of wood is generated by solar power, the sun, and requires no power to irrigate, as this is done through natural rainfall. Sure, fossil fuel will be used in the harvest of the logs, however, this is an extremely efficient process and harvesting will only occur in an area after decades of growth. An important fact to remember about wood is that it stores carbon within its fibre. Trees absorb carbon dioxide from the air during their growth and return pure oxygen to the environment. Once the carbon is stored in the wood, it remains there until the wood completely decomposes. This stored carbon makes up nearly half the wood's dry weight.

The production of products like metals, concrete, drywall or even brick, require far more consumption of energy and burning of fossil fuels. In many wood processing facilities, the wood byproducts or waste material is used for generating power for those factories. If you consider this along with the fact that the creation of the material requires little to no energy, and there is little fossil fuel consumption in harvesting the material, it has been suggested that wood products are "carbon neutral", or possibly even "carbon negative".

Life cycle tests have been conducted with various building materials to assess the number of kilograms of carbon emissions which are generated in the production of one metric ton of a given material. Studies included everything from harvesting and the preparation and processing of raw material, conducting primary and secondary manufacturing, as well as accounting for the transportation needed during the process. We should also consider the net effect of the carbon storage of wood; removing carbon dioxide from the air and storing it in the fibre until decomposition. This makes these products carbon negative (Framing lumber -457 kg, and MDF -382 kg). These studies show an obvious environmental advantage in using wood products.

Here are a few comparisons:



References: Dr Jim Bowyer, Dr Steve Bratkovich, Alison Lindburg, and Katheryn Fernholz, 2008. *Wood Products and Carbon Protocols Carbon Storage and Low Energy Intensity Should Be Considered.* Dovetail Partners, Inc.

to page 81 ⇨

From page 79:

Bedson Timbers launches hardwood flooring showroom

The decision to opt for the Mesopotamia nomenclature hints at Bedsons international footprint, the Mesopotamia designation forming part of Bedsons Argentinean operations which includes value addition and reforestation operations, that in turn intersecting with Oscar Bupo, CEO of the Bedson Group's ongoing search for sustainability.

On trends and imports

The decision to opt for the showroom was, as already mentioned heavily influenced by the need to extend the choices that are available to the end-user. "In addition to

increased choice, our service offering also had to step up a gear to remain competitive. The showroom allows us to do this," Oscar Bupo says.

The showroom, plus our ability to manufacture flooring locally gives us the cutting edge that other service providers might not have," Jose Pereiras continues.

Trends that might continue into 2011, speculates Pereiras, are the continued shortage of certain species given the demise of timber suppliers locally while the port workers strike also meant that incoming stock arrived late. Although the hardwood flooring segment remained reasonably resistant to the global downturn, the market will also continue to peak and dip as it did during 2010, this simply the product of a market that is recovering at its own pace, Pereiras affirmed.

EN

W Fearnough Africa (Pty) Limited acknowledges World Aids Day

W Fearnough Africa, well known as Zanogen Machine Knives, are manufactures, suppliers, regrinders and sharpeners of industrial machine knives/blades and related products for the steel, paper, plastic, timber and leather industries. The company's head office is based in Apex Industrial Sites, Benoni.

W Fearnough Africa recognised World Aids Day on 1 December 2010 by lighting candles and having a minute's silence at their workplace. This was done in memory of those who have lost their lives to HIV/Aids and for all the people in our community who have HIV/Aids.

The Company's Wellness Committee believes that although the HIV virus may change your life, it doesn't stop you from living! They urge all employees, as well as members of the community, to go for an HIV/Aids test – it is your responsibility to know your status and get onto the correct medicine before it's too late!

MN



Employees of W Fearnough Africa (Pty) Limited during the moment of silence



Wellness Committee Members, left to right. Bottom row: Jacinto Mulate and Joseph Ntuli, middle row: Graham Trollip and Rochelle Glynn, top row: Alex Khumbanyiwa and Carrie-Anne Cleworth

From page 80:

Why wood?

When considering how "Green" or "Environmentally friendly" wood products are, we must first consider wood's carbon impact in relation to all the other alternatives we have in building and design products. Consider the source of those products. Are the materials certified, sustainable, or recycled? Consider the products emissions and effects on air quality. And consider the supply chain; is the supply chain certified by a third party and do they conduct their business in a way that is environmentally conscious and promote similar environmental practice throughout their supply chain?

MN

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16138 Wood 12/2009

Types of finishes for hardwood floors

Choosing the right finish for hardwood floors will enhance its beauty for many years.

A finish protects the floor from everyday wear, dirt and moisture and provides colour and lustre that gives a floor its own personality. There are two types of finishes: surface or penetrating finishes.

Surface finishes

These are the most popular choice and involve applying a stain to achieve a particular colour, followed by a topcoat of polyurethane or varnish to give a protective coat. Surface finishes are durable, they resist moisture and are easy to maintain. There are four options for the topcoat, and each has its own benefits.

Oil-based urethane is the most commonly used floor finish. Available in gloss, semi-gloss and satin sheens, oil-based urethane is generally applied in two or three coats, with drying time of up to eight hours for each coat. This type of finish emits fumes as it dries, so adequate ventilation is important. Clean up is accomplished with a solvent similar to paint thinner. An oil-based urethane finish ambers with age.

Water-based urethane provides a clear, non-yellowing finish and produces fewer odours than other choices. This product dries quickly and clean up can be accomplished with soap and

water. Some manufacturers make available additives called cross-linkers that can be mixed into the water-based finishes for added durability.

Moisture-cured urethane is a solvent-based polyurethane that is more durable and more moisture resistant than other surface finishes. It is mostly used in commercial, high traffic settings like stores or offices. This finish is available in a satin or gloss non-yellowing formula, as well as one that will take on an amber hue with age. This finish has a strong odour and its application is best left to the professional. Conversion varnish is a clear, non-yellowing product that dries in about eight hours. Like moisture-cured urethane it produces a very strong odour and should only be applied by a skilled wood flooring professional.

Penetrating stains and finishes

These finishes do exactly what their name implies: they penetrate the wood to form a protective seal. The stains soak in to provide colour, and a wax coating gives a low-gloss satin sheen that can be maintained with additional thin application. These finishes require special care – water-based products should never be used to clear or maintain the floor, only solvent-based waxes, buffing pastes, or cleaning liquids specifically made for wax-finished wood floors.

Sheen

High gloss, low gloss, satin finish? Choice is a matter of personal preference. Keep in mind, however, that high gloss finished shows scuffs and scratches more readily than low-gloss or satin finishes. High gloss finishes reflect more light and are typically used in more commercial or contemporary settings, while satin finishes reflect less light and are favoured to more traditional settings.

Extra durable finishes

The latest trends in finishes include products designed to further extend the life of hardwood floors and make them more durable than ever. Some polyurethane finishes contain aluminium oxide to enhance the abrasion resistance qualities of the floor. Some manufacturers report that this finish is 10 times more abrasion resistant than other wood finishes. Swedish finishes are resin-based finishes that originated in Sweden. They form a tough film that is thin enough to allow the grain of the wood to be felt. Swedish finishes do not require waxing and can be recoated without sanding.

Acrylic finishes provide an extremely hard, durable barrier to dirt, moisture, and wear and tear because the finish is actually forced into the pores of the wood at the factory. Acrylic-impregnated floors are among the most expensive and are often used in commercial settings.

Reinvigorating a hardwood image

Changing times are requiring all corners of the wood industry to think more progressively about traditional methods of promoting their products. Enter the United Hardwood Vision Project (UHP).

The initiative is out of North America, but carries relevant lessons for the southern hemisphere wood business. The ad hoc group, which emerged from recent meetings among hardwood industry leaders, has scraped up sufficient cash to hire a PR firm to develop a research-based hardwood branding campaign.

National Hardwood Lumber association (NHLA) executive director Mark Barford says the intention is to develop a central message that all of the hardwood industry can use. The base research will be done by the end of this year and the full promotional campaign is expected to start appearing early 2011.

“The hope is to reinvigorate the image of North American hardwoods and inspire increased consideration and sales. This is a lofty and promising goal.” Although similar cooperative promotions have gone before, Barford says there is a new energy and excitement about the UHP project. 

Source: *The Hardwood Manufacturers Association*



Wood Solutions is “bridging the gap ...”

A new wooden “jogging” bridge was erected by Dutch national Jip Margadant in Daviespool near Onrus recently.

Margadant who is from Den Haag and is an avid jogger told local reporter Pia Nanny that he was tired of having to circumnavigate the coastal path and a large ditch every time he wanted to go for a run and decided that building a wooden bridge was the only option to solve this problem.

The logo of Wood Solutions has a stylistic bridge between the Wood and the Solutions and according to Jip this bridge has

lots of meanings (which he will gladly explain to anyone who is really interested ...).

Margadant, who is the owner of Wood Solutions, a company specialising in the distribution of hardwoods to the industry, contacted Sun Farms in Louis Trichardt to sponsor the round poles and sawn decking for the bridge. This initially travelled down to Durban, whereafter it went by Conti Lines to Saldanha Bay and then to Onrus with help from Imperial Cargo. Deciding to keep it in the family, Margadant contacted his nephew Arnaud Wieffering of Wieffcor who constructed the 46 m long bridge from Eucalyptus, which can withstand most adverse weather conditions and should have a life of about 25 years without any treatments.


Having gone for his first run on the bridge Margadant said that he was glad his nephew did such a good job! MN




The town of Onrus now boasts a new bridge thanks to the efforts of Jip Margadant of Wood Solutions

Wood Solutions for South Africa

Wood Solutions likes to introduce African Hardwoods such as Ekki, Bilinga, Iroko, Movingui, Okan, Padouk and Tali (all possible with FSC) to the South African wood industry. This timber can be supplied direct from Dutch controlled concessions in Cameroon as sawn timber (AD or KD), but also as ready made products such as decking, railings, window and door frame blanks etc. for residential or waterfront developments.





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14947 Wood 04.04.2010

Local efforts block attempt to ship illegal rosewood from Madagascar

writes Rhett Butler

Authorities in Madagascar successfully blocked an attempt to ship illegally logged rosewood from the port of Vohemar recently, according to local reports.

The incident – while isolated – suggests citizens, the Waters and Forests Administration, local media, and shipping companies are having an impact on slowing the rosewood trade that has devastated Madagascar’s rainforest parks, wildlife, ecotourism industry, and rural communities.

News of the pending shipment broke when a local newspaper, *La Verité*, reported that preparations were being made to ship up to 100 containers of rosewood – with a retail value of \$20 million – despite a nationwide ban on rosewood exports. The shipment was allegedly being organised by Vernier “Veve” Mathon, a rosewood trader who claimed to be acting under an exemption granted by Andry Rajoelina, Madagascar’s president under the “transitional government” that seized power during a coup in March 2009. Mathon said the customs authority of Vohemar had signed off on a shipment aboard the *Kiara*, a ship owned by the French company CMA-CGM. But as news of the impending shipment spread, officers from the Waters and Forests Administration stepped up efforts to monitor the port, according to a local source.

“It was the officers of the Waters and Forests Administration who really prevented the traffickers [from succeeding],” said the source. “They followed each empty container in great detail with serial numbers in the entire area of Vohemar and double-checked what was in it. This way, the traffickers couldn’t fill the containers [with rosewood] out of sight of the officials.”

At the same time, the shipping company CMA-CGM also increased its vigilance.

“CMA-CGM has been very careful with its shipment and checked all the forms,” the source said, noting that the September arrest of two Maersk representatives in Toamasina (Tamatave) for allegedly allowed rosewood-filled containers to leave the port aboard one of their ships, may have had an impact.

“It is very likely that the misadventure of the two Maersks representatives in Toamasina makes shipping companies very sensitive, now.”



An overhead view pin-pointing illegal stockpiles

There were also indications of grassroots opposition to the shipment, include local discussions around organising an “occupation” of the port in order to bear witness to any transgressions. Rosewood trafficking has turned into a hot political issue in recent months in Madagascar, with members of the transition authority being linked to illicit transactions. Last month an undercover investigation by the Environmental Investigation Agency and Global Witness captured Chinese rosewood dealers on video claiming to they make wood deals directly with President Rajoelina.

But rosewood trafficking isn’t new to Madagascar: research published in the June issue of the journal *Madagascar Conservation & Development* found that rosewood logging has followed a cyclical pattern since at least the 1990s. Timber is harvested on a continual basis and stockpiled until a natural disaster, like a cyclone, or political strife creates an opportunity for shipment. Logging syndicates make a fortune

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From page 84:

Local efforts block attempt to ship illegal rosewood from Madagascar

until opposition from conservation groups and international aid agencies shuts down the trade, at least until the next event.

"Illegal exploitation continues throughout the entire cycle, as the government only really controls the export process (ie, from the loading of containers on board a ship in port to its departure). Timber exporters accumulate stocks while waiting for a favourable phase in the cycle," wrote Randriamalala and Liu, authors of the *Madagascar Conservation & Development* article.

Most of the benefits from illegal logging accrue to a small group of wealthy individuals. The costs are borne by the rest of Malagasy society, which is increasingly dependent on tourists who come to see the island's natural attractions, including endemic wildlife like lemurs and impressive landscapes like rainforests and coral reefs. Deforestation can also reduce the availability of clean water and food sources.

"Madagascar's tourism industry annually brings nearly a half-billion US dollars to tens of thousands of people involved in all aspects of the industry (hotel and restaurant staff, guides, drivers, taxi operators, boat skippers, artisans and more)." Randriamalala and Liu wrote. "By contrast, the illegal high-end timber industry has resulted in a one-time windfall of an estimated US\$ 220 million for just 23 individuals."

Source: *Mongabay*

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