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Accenture recently released a study on sustainability titled, “The UN Global Compact – Accenture CEO Study on Sustainability 2013” with the lead stating, “Architects of a Better World.” To that charge, let’s hope so because the sustainability movement is going to need a push.

The study incorporates input from more than 1,000 chief executives worldwide “on the past, present and future of sustainable business, and on what it will take to harness sustainability as a transformative force in the global economy.”

The study is comprehensive to say the least. In a foreword written by Georg Kell, Executive Director, UN Global Compact, and Bruno Berthon, Global Managing Director, Strategy & Sustainability Accenture Management Consulting, the writers say that in recent years they’ve “witnessed a remarkable broadening of the corporate sustainability movement.”

However, the study reveals that although CEO’s understand and agree on the importance of taking action on sustainability initiatives, constraints outside of their businesses may not allow them to continue.

“Some 63% of CEOs expect sustainability to transform their industry within five years — and 6% believe that embedding sustainability into core business will drive revenue growth and new opportunities. But underlying our in-depth conversations with CEOs is a sense of frustrated ambition. Business leaders see sustainability reshaping their business environment and are committed to reorienting their companies to take advantage as they scale up their contribution to global priorities. But even as they make progress in embedding sustainability through their business, it is becoming increasingly apparent that they are constrained by market expectations, and are struggling to quantify and capture the business value of sustainability.

“In many cases, business leaders feel that given the structures, incentives and demands of the market, they have taken their companies as far as they can. While a few leading companies are deepening and intensifying their commitments on sustainability, others are growing skeptical that addressing global sustainability challenges will ever become critical to their business success within current economic systems and markets.”

In the survey of 1,000 CEOs across 103 countries and 27 industries, business leaders’ views on the pathway towards a sustainable economy include: “83% of CEOs believe that government policymaking and regulation will be critical to progress.”

“It is clear that the corporate sustainability movement is broadening, with a deeper awareness and commitment evident in every quarter of the world, but many business leaders express doubts about the pace of change and the scale of their impact. Far from continuing to a new peak of achievement, many companies have become stuck on their ascent, unable to scale sustainability at the pace required to address global challenges and achieve business success.”

Maybe I’m misinterpreting the aforementioned passage, but ‘global challenges’ seems to be a nice way of pointing to government regulation and intervention – the very vehicle that should be collaborating with businesses – as the biggest hindrance in companies’ efforts to achieve sustainable operations.

I’ve read where sustainability can be defined as ‘the capacity to endure.’ For everyone’s sake, let’s keep our fingers crossed that our planet can endure the ‘global challenges’ it currently faces.
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Verso Corporation on Aug. 21 announced plans to make major reductions in its coated paper and pulp production capacity by shutting down the No. 1 pulp dryer and No. 2 paper machine at its Androscoggin Mill in Jay, Maine, and indefinitely idling its mill in Wickliffe, Kentucky. Together, these actions will reduce Verso’s production capacity by 430,000 tons of coated paper and 130,000 tons of dried market pulp.

Verso intends to implement these capacity reductions beginning in the fourth quarter of 2015.

Verso’s decision to reduce its production capacity was driven by several factors. North American coated paper demand is in secular decline, down 4.7% in the first half of 2015, following declines of 3.4% and 4.3% in 2014 and 2013, respectively, according to the Pulp and Paper Products Council. The effects on U.S. producers have been made significantly worse by a change in the net trade balance due to the strengthening of the U.S. dollar relative to foreign currencies, which has resulted in increased foreign imports from Asia, Europe and Canada and decreased U.S. exports. In addition, high operating costs in Maine, especially high energy costs and local property taxes, were contributing factors.

“One of Verso’s founding principles is to do what’s right for the company as a whole,” said Verso President and CEO David J. Paterson. “This includes maintaining a balance between Verso’s supply of products and our customers’ demand for them. Remaining true to this principle, and after a comprehensive review of our assets, inventory and demand forecasts, Verso has decided to make significant reductions in our coated paper and pulp production capacity at our Androscoggin and Wickliffe mills.”

The shutdown of the No. 1 pulp dryer and the No. 2 paper machine at the Androscoggin Mill will reduce Verso’s production capacity by 150,000 tons of coated paper and 100,000 tons of dried market pulp. In addition, to help mitigate the high energy and other operating costs in Maine, especially high energy costs and local property taxes, Verso will optimize the mill’s pulp, power and recovery assets. The optimization efforts are expected to take place in the fourth quarter of 2015 and the first quarter of 2016.

The Wickliffe Mill has one machine with the capacity to produce 280,000 tons of coated paper and 30,000 tons of dried market pulp. Verso anticipates that the capacity reductions and optimization of the Androscoggin Mill will result in the permanent elimination of approximately 300 jobs, and expects that the indefinite idling of the Wickliffe Mill will result in the layoff of approximately 10 employees.

“Decisions to reduce production capacity are never easy,” Paterson stated. “They are especially difficult for the employees and their families who are directly affected by these actions.”

### Kruger to Convert Newspaper Machine to Lightweight Linerboard

Kruger Packaging L.P. announced an investment of $250 million to convert the No. 10 Newspaper Machine (PM10) at Kruger’s Trois-Rivières Mill to manufacture 100% recycled lightweight linerboard.

The project has received $190 million in support from the Quebec government, which includes an $84-million loan to finance the cost of the conversion and a $106-million participation, through Investissement Québec, in a new company that now combines all of Kruger’s Containerboard and Packaging activities. As a result of this investment, the Quebec government will have a 25% ownership in this new company.

Over the coming 20 months, PM10 will be completely modernized, and once the machine is up and running in 2017, it will produce 360,000 metric tonnes per year of 100% recycled lightweight linerboard, a portion of which will be sold to Kruger Packaging’s box plants in LaSalle (Quebec) and Brampton (Ontario), while the remainder will be sold on the market.

Kruger noted that PM10 will continue to produce newspaper until two months before the end of the conversion project. The mill’s other newspaper production line, PM7, will remain in operation into the future.

### Clearwater Paper to Begin $160 Million Upgrade to Lewiston Mill

Clearwater Paper will begin construction of its continuous pulp digester project at the company’s pulp and paper mill in Lewiston, Idaho.

“After many months of detailed review and reaching a multitude of milestones, the project is now a reality,” said Jay Backus, Clearwater Paper’s vice president of mill operations in Lewiston. “Getting to this launch point was no simple task, and there is a long list of individuals and agencies that deserve credit.”

Construction of the project is slated to begin in October 2015 and expected to be completed in September 2017. Benefits from the project include significant reduction in air emissions, improved pulp quality and production, and more efficient utilization of wood chips, i.e. more pulp from the wood fiber Clearwater Paper uses.
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Midland Paper Acquires Shaughnessy, Kniep, Hawe Paper Company

Midland Paper, Packaging + Supplies in mid-September acquired Shaughnessy, Kniep, Hawe Paper Company ("Shaughnessy"), one of the oldest and most respected independently-owned paper merchants in the United States.

Founded over 135 years ago, Shaughnessy is a full-line, full-service merchant distributor of Printing and Writing Papers, Book Publishing Papers, Magazine and Catalog Papers, Digital and Specialty Substrates, Wide Format Graphics, Graphic Supplies and Packaging.

"Shaughnessy has a long and distinguished history as one of the leading merchant distributors in the Midwest," said Stan Hooker, Chairman and CEO of Midland. "We have known the owners and senior management of the company for many years and have the utmost respect for the quality of their organization and its people."

With over 130 employees, Shaughnessy is headquartered in St. Louis, Missouri, where it maintains its principal warehouse and administrative offices.

Catalyst to Indefinitely Curtail No. 12 Paper Machine at Rumford Mill

Catalyst Paper has decided to indefinitely curtail the No. 12 paper machine at its Rumford, Maine mill. The machine was temporarily curtailed on May 20, 2015 and 51 employees were laid off.

According to Catalyst, the decision is fully market-related. "North American paper markets continue to be challenging with a decline in demand for coated paper, which is manufactured on the No. 12 paper machine at the Rumford mill in Maine," the company said in a written statement.

"This is a difficult, but necessary decision that supports Catalyst’s commitment to align mill operations and production with market demand," said Joe Nemeth, President and CEO.

As transition and job loss mitigation stemming from this curtailment has already been completed, no additional layoffs are expected as a direct result of this announcement, the company noted.

"We remain committed to making the Rumford operation successful. Year to date, we’ve invested more than $10 million in upgrades to the mill, including major maintenance related to the recovery boiler. The company is also implementing a proven revitalization program to increase productivity, and developing new, higher-value products to optimize Rumford’s production capability," Nemeth said.

PaperWorks to Invest Over C11 Million in Boehmer Box Facility

PaperWorks Industries said that it will make a strategic investment of more than $11 million CAD ($9 million USD) over the next year to expand the capabilities of its Boehmer Box folding carton manufacturing facility in Kitchener, Ontario, Canada.

The plant, which was one of the facilities acquired from CanAm-Pac in July of this year, manufactures folding cartons for a variety of products including dry and frozen food, beverage, pharmaceutical, household goods, personal care and institutional foodservice.

The investment in Boehmer will include new sheet-fed lithographic printing presses and related carton-making equipment.

Upgrading the 340,000 square feet of manufacturing and warehouse space will enable Boehmer to increase carton production by almost 75 percent, PaperWorks said.
From increasing fiber yield to maximizing energy efficiency, we make the best solutions possible.

For more than 100 years, papermakers have relied on Kadant to optimize paper mill performance. And today, our commitment to making the best solution possible is just as strong. We continue to invest in people, technologies, and product innovations to help our customers maximize product quality, productivity and operating efficiencies.

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Visit us online at www.kadant.com and see what the paper people at Kadant are doing today to solve the papermaking challenges of tomorrow.
BillerudKorsnäs Considering New 500,000 tpy Board Machine at Gruvön

BillerudKorsnäs announced that it is launching two feasibility studies: one regarding investment into a new board machine at its mill in Gruvön, Sweden; and the other regarding the streamlining and development of the production structure for packaging papers.

According to the company, the new machine would have a capacity of approximately 500,000 tons per year of liquid packaging board, cartonboard, food service board and white kraftliner.

In addition, the investment decision would include a streamlining of the production structure within the business area Packaging Paper, as the current production of kraft papers at the Gruvön production unit would be discontinued and replaced by production at other BillerudKorsnäs mills.

A decision about the potential investment scenarios will be made during 2016.

In a press statement, BillerudKorsnäs said, “Driven by global megatrends, the demand for these types of board is increasing. BillerudKorsnäs therefore wants to investigate the possibility of installing a new board machine at the production unit in Gruvön. The investigation is a part of BillerudKorsnäs strategy for volume growth within business area Consumer Board.”

Simultaneously, BillerudKorsnäs is studying the possibilities of further structural change and growth in selected kraft paper segments.

“The investigation includes exploring the possibility of moving the MG paper machine in Finnish Tervasaari, unintegrated to pulp production, to Swedish Skärblacka, which is an integrated unit,” BillerudKorsnäs said. “The investigation also includes investment in further value adding surface treatment capacity at existing MG paper production in Skärblacka.

The feasibility study will be completed during the first half of 2016 and after a potential decision is taken, about a year is required to carry out the investment in surface treatment capacity, and one and a half years for a potential paper machine move, the company said.

BillerudKorsnäs noted that the studies are independent of each other.

EC Looking into Mondi’s Proposed Acquisition of Walki’s Extrusion Coating Plants

The European Commission announced on Sept. 2 that it opened an in-depth investigation to assess whether the proposed acquisition by Mondi of two industrial packaging plants currently owned by Walki is in line with the EU Merger Regulation.

Beyond producing paper and packaging, Mondi operates a number of plants across Europe that manufacture extrusion coating products, and the plants Mondi intends to buy from Walki do the same.

The Commission has concerns that the removal of a key competitor may lead to less choice and ultimately higher prices for customers of wrapping materials which also serve as moisture barriers. The Commission now has 90 working days, until January 18, 2016, to investigate whether these initial concerns are confirmed. The opening of an in-depth investigation does not prejudge the outcome of the investigation.

Mondi and Walki are the two leading suppliers in the European Economic Area (EEA) of several products derived from extrusion coating, in particular wrapping materials for the paper industry and case lining. The two companies are currently vigorously competing on these markets.

Stora Enso to Divest Packaging Plant in Komarom, Hungary

Stora Enso has signed an agreement to divest its offset printed micro-flute packaging plant in Komarom, Hungary to Van Genechten Packaging International S.A., a leading Belgian packaging company.

The initial cash consideration for the divestment of the shares is approximately EUR 12 million, subject to customary closing day adjustments.

“There have been major changes in the Komarom plant’s customer base, making the plant no longer strategic to Stora Enso,” said Gilles van Nieuwenhuyzen, Head of Packaging Solutions division for Stora Enso. “I believe that a new, solid, international owner can give the company the attention it deserves and develop it further in the new situation.”

Based on 2014 annual figures, the divestment is expected to reduce Stora Enso’s annual sales by EUR 14 million and simultaneously decrease the annual corrugated packaging converting capacity by approximately 15 million m².

The Komarom plant employs approximately 90 people.
KraftLine LD is the newest member of our KraftLine family. The KraftLine design is a forming fabric based on Albany’s patented InLine concept for all packaging grades. In developing the KraftLine LD, our goal was to lower your cost-per-ton, and based on customer feedback we have achieved that. In detailed reports, our customers find that the KraftLine LD helped them increase speed, improve runnability, lower drive loads, and reduce wear rates for improved life. *KraftLine is your total solutions package!*

*KraftLine is a trade name of Albany International Corp.*
EUROPE

Södra Cell Mörrum Meets New Environmental Standard

Swedish market pulp producer Södra recently inaugurated an upgraded biological treatment facility for process water at its pulp mill, Södra Cell Mörrum.

“The investment ensures that the mill will comply with the new environmental standards set by the Industrial Emissions Directive (IED), and is part of Södra’s major expansion project now being implemented across all three of its pulp mills,” Södra said.

The upgrade included the addition of a new disc filter, which is used in the final stage of the treatment process. In addition, the system has been expanded to handle higher volumes of the process water in preparation for future pulp capacity increases.

“The environmental impact of Södra’s pulp mills is at such a low level that all of the company’s pulp can be used for paper products that carry the Swan or EU ecolabels,” Södra added.

Kajo Neukirchen Group to Acquire Neenah Lahnstein

Privately-owned Kajo Neukirchen group will acquire paper and nonwovens specialist Neenah Lahnstein GmbH. Subject to regulatory approval, the transaction is expected to close later this year.

Based in Lahnstein, Germany, Neenah Lahnstein specializes in high-quality specialty papers and nonwovens for applications including secure documents that will be exposed to the weather in outdoor advertising or in high-quality wall coverings. The company has about 200 employees and a turnover of about EUR 50 million, and serves clients throughout Europe.

“The high-quality papers and nonwovens of Neenah Lahnstein are found in markets that are growing in the digital age,” said Dr. Michael Bauer, the new CFO of Kajo Neukirchen group and a future board member at Neenah Lahnstein.

The Kajo Neukirchen Group is a family business based in Eschborn, Germany near Frankfurt, which specializes in major holdings in German medium-sized companies in the capital goods industry.
Angara Paper’s plans to build a huge pulp mill in Lesosibirsk, in the Krasnoyarsk region of eastern Russia, appear to be in serious trouble after the company filed for bankruptcy with an arbitration court on September 2.

According to news reports, Angara Paper initiated the bankruptcy proceedings due to debt of about RUB 470 million (approx. USD 7 million at the current exchange rate) and reportedly owes over RUB 3.6 million to its employees.

Angara is owned by Brazzaco Ltd (74.9% of shares) and Bonsin Commercial Ltd (25.1%). Both firms are registered in Cyprus.

Initial plans for the pulp mill were announced in April 2008 with startup scheduled for 2011. However, the economic downturn that followed halted the project indefinitely.

The project appeared to be getting back on track in 2011, when Swedish market pulp producer Södra considered an agreement to become both an industrial and sales partner for the project. However, in January of 2013, Södra canceled the deal saying the scope of the project had changed from the original plan.

In September of 2012, Angara and the Japanese firm Marubeni signed an equipment, procurement and construction agreement under which Marubeni agreed to be the turnkey contractor for the pulp mill. Construction of the plant was planned to begin in early 2013 with startup expected in 2017.

The plans called for a new 1.2 million tonne per year pulp mill that would produce 900,000 tonnes of northern bleached softwood kraft pulp (NBSK) based on birch and aspen, 300,000 tonnes of dissolving pulp (textile pulp), and 380,000 cubic meters of sawn timber. The company planned to export some 80% of the pulp produced by the mill to China, Japan, and other Asian regions.

The total cost of the project has been reported to be around $3.2 billion.

According to the company’s website, JSC “Angara Paper” is a project company (SPV), which carries on priority investment projects in forest development.
Archangelsk Pulp & Paper Restarts Board Machine After Rebuild

The Archangelsk Pulp & Paper Mill (APPM), the largest producer of packaging papers in Russia, recently put its BM 1 board machine in Archangelsk back into service following an extensive rebuild by Voith.

Voith’s scope of supply included the approach flow system, the headbox and a new top wire. Voith also rebuilt the bottom wire.

The goal of the project was to improve board quality on BM 1 and allow for an increase in production capacity in the future.

In addition to the machine rebuild, Voith also undertook the basic engineering and supervised commissioning.

APPM is owned by Pulp Mill Holding GmbH, an Austrian-German group headquartered in Vienna, Austria. The company produces paper, board and corrugated grades in Russia and Ukraine.

Kemira Acquires Soto Industries, LLC

Kemira in early September acquired certain assets of Soto Industries, LLC, a privately owned company, headquartered in Charlotte, North Carolina.

Terms of the deal were not disclosed.

Soto specializes in the application of scale control products, defoamers, and settling agents for the pulp and paper industry.

“The Soto Industries, LLC acquisition is another example of Kemira’s dedication to the pulp and paper industry as well as Kemira’s commitment to execute our global growth strategy via continued investment into our Paper segment,” said Billy Ford, Senior Vice President, Paper segment, Americas.

Liuzhou Liangmianzhen Paper Starts Up New Tissue Machine

Liuzhou Liangmianzhen Paper Product Co., Ltd. has started up the first of two Modulo-Plus ES tissue lines at its mill in Liuzhou, Guangxi, China. The two tissue machines were supplied by Toscotec.

By mid-October, the start-up of the second tissue line and the TT WIND-M high-speed slitter rewinder will follow, Toscotec said.

The Modulo-Plus ES machine is designed for a speed of 1500 m/min, and the first new machine will increase the company’s tissue production by 21,000 tons per year.
Poll Reveals British Consumers Prefer Cardboard Packaging for Delivered Goods

British shoppers prefer to see their purchases packed in cardboard because it offers better protection than polystyrene for goods in transit, as well as being the easiest material to recycle, according to latest research commissioned by the Confederation of Paper Industries (CPI).

This boost for the Corrugated Packaging Industry is from a nationwide survey conducted online by YouGov which found that out of 2,030 respondents who have goods delivered to them, 40% thought that cardboard offered the best solution for their purchases to reach them in pristine condition, while 37% opted for polystyrene and 7% chose plastic.

Significant support for cardboard packaging from shoppers surveyed came from all cross-sections of society, according to the findings from YouGov. London and Scotland scored the highest approval rating regionally with 45% and 46% respectively favoring cardboard’s protective qualities against other packaging materials.

Consumers were also asked which, if any, packaging material is easiest to recycle after receiving the product. Cardboard and paper came out on top with the backing of a huge 85% of respondents (55% and 30% respectively) against just 7% for plastic and 1% for polystyrene.

CPI’s Director of Packaging Affairs, Andy Barnetson, believes that while the result of the recycling question was broadly in line with what the industry expected, the findings for the best product protection in transit should be an eye-opener for online retailers and make them think again about the choice of packaging in their supply chains.

“This latest survey indicating that consumers rate cardboard as the best protection for goods in transit is a really good result for the Corrugated Industry. We may not be far ahead but the fact is that we are ahead — in the area where polystyrene has always previously been seen to lead. It’s another poll that suggests cardboard packaging improves customer satisfaction with their purchases,” said Barnetson.

This YouGov poll of shoppers who have goods delivered to them backs up earlier research which indicated paper-based packaging materials have a positive influence on consumers’ purchasing decisions in-store as well. Corrugated’s renowned environmental credentials — it’s the most recycled material in the packaging industry — and protective qualities are boosting its appeal, making it a vital logistics partner in the 21st Century supply chain.
Appvion recently appointed Kevin Gilligan as Chief Executive Officer. Gilligan had been serving as President of the company’s paper division. Mark Richards will assist with the transition and continue to serve as Chairman of the board of directors through December 31 when he will retire. Richards has served as Appvion’s CEO and President since joining the company in April 2005.

Catalyst has appointed Walter Tarnowsky as Vice President and General Manager of the Port Alberni mill and Graham Kissack as Vice President, Corporate Social Responsibility. Both appointments are effective October 1. Tarnowsky, who joined Catalyst in 2000, most recently served as Catalyst’s director, paper mill productivity. Kissack has been with the company since 1993 and brings extensive experience and expertise to his new role.

Glatfelter announced that Joseph Zakutney has joined the company as Vice President and Chief Information Officer. Most recently, Zakutney served as the Founder and Principal of JJZ Associates LLC and on SAP’s Independent Executive Advisory Council.

Smurfit Kappa Group announced that Tony Smurfit has succeeded Gary McGann as Group Chief Executive Officer, effective Sept. 1, 2015. McGann, who retired, served as CEO of Smurfit Kappa since November 2002. Tony Smurfit has worked in various parts of the Smurfit Group both in Europe and the United States. He was Chief Operations Officer of Smurfit Kappa from 2002 to 2015 and CEO of Smurfit Europe from October 1999 to 2002.

Södra announced that Jörgen Lindquist has been appointed the new Chief Financial Officer of the company. He also becomes a member of Group Senior Management. He joins Södra from IKEA, where he has spent the past five years working as CFO and Acting Vice President of the company’s industry division Swedspan International.

Verso Corporation has named Allen Campbell as its Senior Vice President and Chief Financial Officer. Campbell has over 30 years of financial leadership experience in industrial manufacturing, including 10 years as the chief financial officer of Cooper-Standard Holdings Inc., the parent company of Cooper-Standard Automotive, Inc.

Integrated Environmental Solutions (IES) announced the addition of Ryan Covington as Engineering Manager. Prior to joining IES, Covington worked for Underwriters Laboratories from 2006 to 2014. Covington is a graduate of North Carolina State University with a Bachelor of Science in Mechanical Engineering, and is a member of the American Society of Mechanical Engineers and International Association of Electrical Inspectors.

Kemira recently announced the appointment of Kim Poulsen as President of Kemira’s Paper segment and APAC region and member of the Management Board, effective Nov. 1, 2015. Poulsen has a vast international experience, primarily from Asia and Europe, and joins Kemira from UPM where he held various management positions.

Bill Koehn, Vice President, Printing and Publishing Paper Sales for Domtar, has been selected as the recipient of the 2015 Peyton Shaner Award. The Peyton Shaner Award was established to commemorate the founder of the Association of Independent Printing Paper Merchants. The recipient is recognized as someone who has shared Shaner’s passion for the industry.

Koehn is a 35-year veteran of the paper industry. He began his career in sales with Consolidated Papers in 1980. He joined Weyerhaeuser in 1986 as Special Projects Manager, and later held responsibilities as Market Manager – Coated Groundwood, Regional Zone Manager – Midwest, and Vice President Sales. He was named VP of Printing and Publishing Papers in 2000, a title he retained when Weyerhaeuser merged with Domtar in 2007.

Koehn has also been involved in several industry associations throughout his career, including the AF&PA, NPTA, and Two Sides North America.
OCTOBER 7-9, 2015
PPC Fall Meeting/Leadership Conf.
Paperboard Packaging Council
The Westin Indianapolis
Indianapolis, Indiana, USA
www.paperbox.org

OCTOBER 14-16, 2015
MIAC
Edipap Srl
Lucca Exhibition Centre
Lucca, Italy
www.miac.info

OCTOBER 15, 2015
PIIHF Induction Ceremony
Paper Industry International Hall of Fame
Radisson Paper Valley Hotel
Appleton, Wisconsin, USA
www.paperhall.org

OCTOBER 19-21, 2015
CorrExpo ‘15
TAPPI
The Kentucky International Convention Center
Louisville, Kentucky, USA
www.corrugatedweek.org

OCTOBER 26-28, 2015
Advanced Biofuels Conference & Expo
BBI International
Hilton Omaha
Omaha, Nebraska, USA
www.advancedbiofuelsconference.com

NOVEMBER 2-4, 2015
International Woodfiber Resource/Trade Conf.
RISI
Savannah, Georgia, USA
www.risiinfo.com/events

NOVEMBER 17-18, 2015
Folding Carton Boot Camp (workshop)
Paperboard Packaging Council (PPC)
PPC Headquarters
Springfield, Massachusetts, USA
paperbox.org/bootcamp

NOVEMBER 17-19, 2015
European Paper Week
CEPI
Thon Hotel EU
Brussels, Belgium
www.cepi.org/epw

NOVEMBER 19-21, 2015
CorrExpo ’15
TAPPI
The Kentucky International Convention Center
Louisville, Kentucky, USA
www.corrugatedweek.org

FEBRUARY 1-5, 2016
PaperWeek Canada
PAPTAC
Queen Elizabeth Hotel
Montreal, Quebec, Canada
www.paperweekcanada.ca

FEBRUARY 24-26, 2016
ASPI Spring Meeting
PAPTAC
Association of Suppliers to the Paper Industry
Thompson Miami Beach
Miami, Florida, USA
www.aspinet.org

MARCH 6-8, 2016
Paper2016
AF&PA and NPTA
The New York Palace
New York City, New York, USA
www.paper2016.com

MAY 1-4, 2016
International Pulp Week
Pulp and Paper Products Council
Fairmont Hotel Vancouver
Vancouver, British Columbia, Canada
www.internationalpulpweek.com

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The influence on cut-size paper demand of economic, technological and other factors has been the subject of regular, periodic Smithers Pira research since 2006. In a 2012 study it was clear that even though demand for office paper was in long term decline in all developed markets, there was still little evidence of an imminent universal paperless business environment. Access to new technology and cheaper printing was also stimulating printing on paper.

Output from the most recent study (2015) addressed the key questions:

- What is the future for the grade in the next five years?
- What key factors will influence demand going forward?
- How will demand be influenced by end use market applications?
- Will the omnipresent smartphones/tablets further negate paper use?

The research showed that the decline of office paper witnessed in the last 10 years will continue. However this decline is not as rapid as other printing and writing grades. Future use of office paper will increasingly be more segmented, reflecting both geographical and end use sector differences.

The rise of digital technology, as exemplified by increasing access and use of Wi-Fi and phones/tablets, will continue to be the major inhibitor of demand. Developments in hardware and virtual storage systems will increasingly negate the need for printing and archiving paper based material. In contrast, the greater availability of inkjet and laser printers and affordable color print for office applications will lead to increased demand for some specific end uses.

There are clear indications that more end use sectors, including health and legal, are embracing digital systems to replace office paper based systems. Many public sector organizations have long-established protocols for processing work built on office paper use. Change here to more digital based systems will continue to occur, but will be dependent on the availability of monies for digital based infrastructure investment and a willingness to change.

It is predicted in two years’ time there will be a worldwide installed base of 905 million tablets equal to over one in eight people on earth. Such growth in technology will inevitably lead to replacement of paper systems in a number of end use sectors and negating further paper use. A long term view is that such systems will ultimately replace paper in the majority of printed applications in business and office environments. However the speed of replacement may increase more rapidly as the use and familiarity of smartphones and tablets becomes common place with very young children.

Given this rapidly evolving market sector, how should paper suppliers respond?

Paper suppliers need to embrace the evolving multi-media office environment and consequently offer a genuinely tailored,

The greater availability of inkjet and laser printers and affordable color print for office applications will lead to increased demand for some specific end uses.
flexible and proactive service to all office paper end users from large corporates to SOHO purchasers across the end use spectrum.

Further, a measured capacity management response by paper manufacturers is required to enable greater control of supply: demand ratios going forward.

The Future of European Office Paper Markets to 2020 provides a market view through to 2020 and forecasts the likely demand by country over the next five years. For further information, please visit: www.smitherspira.com.

Reference:
1 Future of Office Papers, Smithers Pira 2006
2 Changing Paper Demand in Office and Business Environments, Smithers Pira 2012

Smithers Pira is the worldwide authority on packaging, paper and print industry supply chains. Established in 1930, Smithers Pira provides strategic and technical consulting, testing, intelligence and events to help clients gain market insights, identify opportunities, evaluate product performance and manage compliance.
Groundwood Market Buffeted by Trade Winds and Secular Demand Decline

U.S. coated and uncoated groundwood demand continues a secular decline in 2015. After rising modestly early in the year following significant capacity reductions prices were mostly stable for several months although some grades saw a bit of slippage owing to low priced imports. Further increases will likely be tempered by the strong U.S. dollar although exchange rates have stabilized.

By Harold M. Cody

The overall picture of the groundwood paper market three quarters of the way through 2015 isn’t real pretty as it’s plagued by oversupply and a fall in domestic demand for all grades. Nevertheless, things have settled down some following a tumultuous 12 month period that saw one of the largest restructurings in recent memory as a result of the Verso and NewPage mega merger coupled with the sudden emergence of Catalyst as a major player in coated groundwood grades. These changes had resulted in a lot of uncertainty on grades and price levels in the early part of 2015.

The current weakness in demand isn’t unexpected and is simply a continuation of the secular decline in demand for all grades of graphic papers used in magazines, newspaper inserts and catalogs, which are all key markets for coated and uncoated groundwood grades.

SHIFT IN EXCHANGE RATES

However, complicating the outlook and making it more uncertain from the standpoint of the producer side is a shift in trade trends driven by a major movement in exchange rates since early 2014 as well as the recent imposition of duties on imports of SC grades. The strong U.S. dollar has become a key factor for all commodities including the grades making up the graphic papers market. Both The Euro and Canadian dollar have fallen 20-25% from peak levels reached in early 2014 and this has made mills in Canada and Western Europe very competitive in the U.S. market.

In turn, the price gap between Europe and N.A. has ballooned to $200 on some grades as U.S. prices became the highest in the world for these mills. However, after falling steadily for several months last year from a level of about 1.4 USD/Euro in early 2014, the Euro has stabilized in recent months at about 1.10, although the Canadian dollar slipped to 0.77 in July. As noted, an additional factor relative to Canadian mills occurred in July 2015 when countervailing duties were imposed on imports of Canadian SC paper.

Given the strong upward movement in the dollar in 2014, an increase in imports was expected and North American coated imports spiked beginning in April when they jumped...
20% vs. prior year levels. It’s likely they will continue at somewhat higher levels, particularly for coated groundwood, into next year.

DEMAND OFF, CAPACITY CUT
As mentioned, the overall tone of the market continues to be driven by shrinking demand. Based on data through July, North American demand for uncoated groundwood papers is off 12% vs. the same period last year while coated paper demand is running 6% behind 2014 levels over the same period. During the second quarter, N.A. coated groundwood demand fell 9.6% vs. the second quarter of 2014. Operating rates improved to 92% for coated groundwood mills in first half 2015 due to capacity reductions. North American mill output is suffering a bit as well owing to an 8% increase in coated groundwood imports. Uncoated groundwood imports were actually down 15%.

Reacting to the rapid shrinkage in coated paper demand industry leader Verso Corp. cut significant capacity last year including closure of the 350,000 tpy coated groundwood Bucksport mill in Jay, Maine. It also cut an additional 430,000 tpy via the closure of one paper machine at the Androscoggin mill in Maine and shutting of the Wickliffe, Kentucky mill, although much of this was coated freesheet capacity. Catalyst also reduced coated groundwood capacity via the shutdown of No. 12 machine at the Rumford mill in Maine.

In total about 15% of North American coated groundwood capacity was closed in late 2014, setting up hope that rising operating rates would lead to a significant improvement in pricing.

Demand for uncoated grades is also off, particularly for lower quality SC-B and soft nip grades. Producers responded by cutting capacity for these grades via Resolute’s closure of the Laurentide mill and Catalyst’s shut down of the No. 9 machine at Powell River in late 2014.

The fall in demand follows similar declines posted in 2014 when total North American printing and writing paper demand fell 4.1% to 21.4 million tons according to the Pulp and Paper Products Council. Coated mechanical demand fell by nearly 5% to 3.5 million tons, while uncoated groundwood demand was off just under 5% to 4.2 million tons. However, SC demand did better in 2014, as it took market share in some applications from coated groundwood.

The biggest drops in demand were for lightweight directory papers and lower quality machine finish and SCB grades. U.S. coated groundwood imports last year were about 800,000 tons, a drop of about 15% vs. 2013 levels, and reflecting the drop in demand. Through April 2015, North American printing and writing paper demand was off just over 5% vs 2014 levels at 5.9 million tons. Coated and uncoated mechanical demand was down 5.3% and 12%, respectively, over the same period. As noted, the reduction in capacity has helped to boost coated operating rates which averages 96% over the January to April period.

PRICING REMAINS OK
Despite all of the restructuring on the producer side and potential upheaval caused by a rise in imports, prices have remained relatively stable although some minor slippage has occurred due to the rise of competitively priced imported paper, with prices dropping on average about $10/ton in the second quarter. Early in the first quarter of 2015, prices on No. 5 grades moved up about $30 per ton over late-2014 levels and SC prices also moved up but only about $15-$20 per ton. Since so much high quality SC paper is made in Canada and Europe — and these mills have benefitted a lot from the strong dollar — prices on SC grades may not go up as much as coated grades if prices rise as producers seek to use their lower cost as an advantage to gain additional market share from LWC grades.

OUTLOOK
The outlook depends a lot on how much pressure imports apply to the domestic market. At the least, they are likely to reduce additional price increases on coated grades or push back increases that were hoped for this fall or in 2016. Early in the year most observers thought that an additional increase beyond the gains posted in the first quarter on prices would be a slam dunk after the late 2014 capacity reductions in coated groundwood. The fact that exchange rates vs. the Euro have held steady for the last few months may have given producers some breathing room, but prices could fall back further if imports continue rising. A final wild card is the import duties on SC grades and whether that will have any impact on pricing.

Harold Cody is a contributing writer for PaperAge. He can be reached by email at: HCody@paperage.com.
International Paper’s CEO says sustainability is doing the right things for the right reasons, and the company has shown that it practices what it preaches.

By John O’Brien, Managing Editor

Editor’s note: This article contains excerpts from International Paper’s 2014 Sustainability Report.

Sustainability has become an essential component to doing business responsibly and successfully, and growing research shows that companies with the most advanced sustainability strategies perform best. But simply thinking that your business conducts itself in a sustainable manner and it actually doing so may be two very different things.

International Paper, for one, has done a commendable job in its accomplishments and its goal-oriented initiatives in the world of sustainability. The company has earned a number of annual honors for the way it does business, and two of these recognitions stand out more so in the area sustainable business practices:

*World’s 100 Best Corporate Citizens List 2014* by Corporate Responsibility Magazine; and Ethisphere Institute’s *World’s Most Ethical Companies® 2015*.

In a *Forbes* article, Corporate Responsibility Magazine’s Editor-in-Chief, Bill Hatton, said, “A good corporate citizen doesn’t treat people and the environment as a means to an end.” To make the list, “You have policies in place and you disclose what you’re doing.”

The Ethisphere Institute’s *The World’s Most Ethical Companies* list “designation recognizes companies that truly go beyond making statements about doing business ‘ethically’ and translate those words into action. Honorees not only promote ethical business standards and practices internally, they exceed legal compliance minimums and shape future industry standards by introducing best practices today.”

In 2012, IP announced 12 voluntary sustainability goals to measure its performance with specific targets set for 2020. Since then, the company has worked with internal and external stakeholders to “identify key issues that are material to our global operations.” The process led to an update of its sustainability strategy in 2014, which prioritized six key areas.

**SAFETY**

“Eliminating fatalities and injuries in our workplace is our highest priority. Our Life-Changing Injury and Fatality Elimination (LIFE) safety program has reduced life-impacting injuries by 68 percent since its inception. In 2015, leaders at all levels of the company will receive IP Safety Leadership training,” said Mark Sutton, IP’s Chairman and CEO.

According to IP, safety is a core value and the company’s highest priority. While the ultimate goal is an injury-free workplace, IP reported that in 2014, it had a 39 percent reduction in serious injuries over the previous year.

IP attributes its safety improvements largely to the implementation of a program called “Life-Changing Injury and Fatality Elimination (LIFE),” which “aims to create a safe work environment by ensuring that employees are trained and educated, that facilities and equipment are designed safely, that proper processes are in place, and that equipment and tools used by employees meet the highest safety standards,” as stated in the company’s 2014 Sustainability Report.

IP noted that in 2014, efforts were expanded beyond

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*IP stresses the importance of actively engaging diverse groups of people including employees, customers, subject matter experts, nonprofit organizations, governments, and members of the community.*
“We only want to work with suppliers who solve problems and help us accomplish things.”

Efficiencies and throughput at Atlantic Packaging’s New Forest Mill are increasing since the machinery and clothing have been fine-tuned to optimum levels.

“When I was a young superintendent, I availed myself of the knowledge suppliers were willing to share,” says Ed Stapleton, Mill Manager at Atlantic Packaging’s New Forest Mill. “I’m never going to be an expert in machine clothing, so I looked for suppliers to enhance our machine’s performance the best. Over the years, AstenJohnson helped us solve nagging problems. They respond to any need we have. It has turned into a relationship of trust.”

When speeding up its machine, New Forest experienced problems in the forming section. “We needed better drainage of the top wire and we had to solve the tendency for it to pick up stock off the bottom wire,” says Eric Faulkner, Production Manager. “AstenJohnson came up with a finer mesh for KraftStar™ fabric that totally eliminated the problem.”

“We’re at the point now where this machine is running beautifully,” Stapleton says. “I’m reluctant to make any big changes. Clothing cost per ton is minimal for a paper machine. But, if you don’t have good fabrics and felts, it will cost you a lot of tons.”
education and equipment to focus on safety leadership. The company worked with safety leadership experts to develop a training program aimed at providing safety training and certification for leaders. By year’s end, IP trained more than 1,200 employees at its U.S. mills, while also delivering an executive version of the training, which was used to train a number of senior leadership teams.

**WATER USE**

International Paper has mapped all 41 of its mills based on water-related risk to help identify water conservation opportunities. The company intends to create site-specific plans for strategic watershed areas to reduce water use in water-stressed locations.

A good example of IP’s water conservation efforts involves the company’s Pensacola containerboard mill that in 2010 got together with the local water utility in Cantonment, Florida. Emerald Coast Utilities Authority (ECUA) oversees water and wastewater systems of Escambia County and the City of Pensacola.

The idea was to use treated municipal water for the mill’s manufacturing processes rather than using fresh water from the aquifer. The reclaimed water has worked well in the mill’s manufacturing processes, and it appears to be a sustainable solution to help conserve fresh water. As a result of this effort, the Pensacola mill reduces the amount of fresh water used by five million gallons per day, which amounts to 20 percent of the total water intake. As of 2014, this conservation effort totaled six billion gallons of fresh water saved since 2011.

Additionally, after the water is used by IP, it flows from the mill’s water treatment plant over 3,000 acres of IP-owned wetlands north of Perdido Bay where natural processes provide further treatment to the water. IP has also contributed to the wildlife habitats and ecological value in these historic coastal wetlands by planting 160,000 trees. In 2014, IP continued to monitor the ecosystem and is now focused on sustaining the area’s renewed ecology.

**GREENHOUSE GAS (GHG) EMISSIONS**

In its primary mills, IP uses renewable carbon-neutral biomass to meet nearly 70 percent of its energy needs. Since 2010, the company has reduced GHGs by 8.3 percent and improved energy efficiency by 6.1 percent.

One example of GHG reduction took place in 2014 at IP’s coated paperboard mill in Augusta, Georgia. IP Technology team members and other personnel performed an energy audit which led to the implementation of the Evaporator Cooling Water (ECW)/Hot Water Optimization project. One area of the mill was consuming a large amount of steam in the winter due to the outside temperature, while another was operating a cooling tower to get rid of excess heat.

The solution was a project to integrate the energy use and waste heat in the different areas and optimize energy use at the mill. This project allows the mill to reuse heat captured in water after it is used to cool plant equipment. The conserved heat is used to generate more hot water needed elsewhere in the plant. The optimized system is one of a number of IP mill energy systems that complement each other to help...
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recover energy in the form of heat. Recovering wasted heat reduces the amount of steam that is required to produce the same amount of pulp and paper. This steam reduction results in less fuel used by the plant’s boilers, which, in turn, reduces energy usage and GHG emissions.

The project resulted in a 22,450-tonne reduction in CO₂e emissions per year; a 2% reduction in the plant’s total steam production and; a 3.7% reduction in energy use over 2010 baseline year.

FOREST STEWARDSHIP

Forests are the largest source of IP’s raw materials. The company’s focus on forest stewardship essentially guarantees all of its fiber comes from responsibly managed forests, and that ecological benefits will be available for generations to come. Since 2010, IP has increased its certified fiber by almost 28 percent and the company states that it will continue to strive toward its goal of a 35 percent increase by 2020.

ETHICS AND COMPLIANCE

“Ethical behavior and personal integrity are at the core of our culture,” IP states. “These values extend beyond our employees to our suppliers, who are required to maintain the same level of ethics and integrity in their dealings with us.”

In 2014, IP expanded the number of suppliers trained in its Supplier Code of Conduct and obtained commitments of compliance from the vast majority of suppliers. Over the next few years, IP intends to enhance these processes and expand its ability to hold suppliers accountable to the commitments into the future.

STAKEHOLDER ENGAGEMENT

According to IP, “By engaging our stakeholders we are building trust and credibility to create advocates for our great company.”

In order to understand what issues are most important to its stakeholders, IP conducts surveys both internally and externally and uses the feedback from the surveys to steer decisions and future engagement with stakeholders. As part of this process, IP said it has learned that issues related to the environment and the company’s products consistently rank highest among external stakeholders.

“One of the things we did in 2014 was engage customers to better understand their perceptions of the benefits of using corrugated packaging,” IP said in its report. “Based on that feedback, we worked with researchers and subject matter experts to evaluate our products. These experts helped guide our direction and ultimately became spokespeople who began a dialogue focused on educating key stakeholders, customers, and consumers.”

To help explain the sustainability value of corrugated packaging, International Paper engaged experts to provide credible information. In particular, IP requested input from the World Wildlife Fund (WWF) about its perspective on responsible forest management and how fiber-based packaging can positively influence forest management. The result of this dialogue was a WWF and International Paper produced video that specifically addresses the fact that avoiding fiber-based packaging doesn’t necessarily save trees, as long as the wood fiber used to make the packaging comes from credibly certified, responsibly managed forests.

International Paper in 2014 also partnered with the International Conservation Caucus Foundation (ICCF) to host a Forest Products Industry Day on Capitol Hill. The first of its kind for the industry, the event focused on educating policy makers and their staff on the sustainability, efficiency, and responsibility of the forest products industry. The event included panel discussions on domestic and international manufacturing issues in the forest products industry as well as the opportunity to engage in informal conversations with U.S. representatives and congressional staff.
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Selecting the Best Market Pulp Fiber – All Pulps Are Not the Same

Understanding the specific benefits of pulp fibers and optimizing the blends should be in the toolbox of any product technologist and business strategist.

By Stuart Sharp

It all started with Brazil. Brazilian companies have revolutionized the market pulp industry. They first had a significant impact on the global scene close to 40 years ago, targeting printing and writing paper and the consumer towel and tissue segment. Discussion of eucalyptus pulp relative to Northern Hardwoods continued for years, but today no one doubts that eucalyptus has carried the day.

Eucalyptus had an unmatched advantage over the northern species; it matured perhaps 10-12 times faster offering cost advantages and flexibility. Critical to its technical success was the opportunity it presented to clone and genetically engineer trees with fibers adapted to the needs of papermakers.

Other developments with their beginnings in the 1970s have also led to worldwide changes in the market pulp business, of course. The thermo-mechanical process produced pulps of far higher quality than groundwood and over recent decades the addition to TMP of chemicals and bleaching (CTMP/BCTMP) have led to further improvements broadening the appeal and usability of such products.

More recently, new regions have made their appearance, providing pulps (notably bleached kraft) made from unconventional fibers. This is true notably in Southeast Asia, where there has been growth in pulp based on mixed tropical hardwoods and eucalyptus or acacia plantations.

Another unconventional pulp is non-wood pulp made from wheat straw and what Kimberly-Clark calls “rapidly renewable plant fiber” namely, pulp made from bamboo. Whether these pulps will be globally accepted remains to be seen. But one thing is obvious: the market pulp industry has been evolving and will continue to do so.

A QUICK TECHNICAL LOOK AT FIBER

Cellulosic pulps are basically comprised of the same materials — cellulose (polysaccharides), hemicellulose, lignin, and extractives. The pulp characteristics and differences are:

- Fiber wall thickness
- Fiber length
- Fiber diameter
- Chemical composition
- The separation process of the fibers from the chip matrix. This includes kraft cooking, sulfite, NSSC, BCTMP, and other high-yield processes. Also to be included is the bleaching process for the bleached pulps.

Fiber properties of the pulp critical to the papermaker and to the ultimate product include:

- **Drainage** – related to WRV, porosity, strength development, and population
- **Wet sheet strength** – coarseness, fiber-fiber bonding
- **Formation** – coarseness, porosity, fiber population
- **Water retention value** – fiber dimensions, fiber wall thickness, and coarseness
- **Porosity** – coarseness, fiber population, fiber-fiber bonding
- **Bulk** – fiber diameter, coarseness, fiber wall thickness
- **Fiber stiffness** – fiber length, fiber wall thickness
- **Opacity ability** – fiber length, fiber population, coarseness, fiber-fiber bonding
- **Tensile** – fiber length, fiber-fiber bonding, fiber population
- **Tear** – fiber length, fiber-fiber bonding

The correct blend of these properties will lead to optimized machine runnability, reduction in off-spec paper produced, optimized steam and chemical consumption, optimized fiber recipe cost, and potentially superior end-product quality.
In general, some of the more important pulp fiber properties subject to manipulation are:

- Fiber length, whose effects are outlined in Figure 1.
- Fiber coarseness, the inverse of density and highly indicative of fiber flexibility. A high coarseness fiber will have improved bulk, porosity, absorbency, drainage, low fiber bonding strength, and potentially increased picking and linting. A low coarseness fiber will have improved fiber-bonding, increased wet web strength, improved opacity, and improved formation, better coating holdout, higher overall strength, and increased water retention value.
- Fiber wall thickness
- Fiber population, a measure of the number of fibers per unit weight of pulp. In general, fibers with a high fiber population tends to have short fiber length, better fiber-fiber bonding and can lead to negative results for bulk, porosity, and softness. Eucalyptus fibers are somewhat different in that they have high populations but also low tendencies to collapse. This means that they maintain bulk and absorbency.
- And, of course, inherent fiber strength measured in different ways.

FINISHED PRODUCTS

The properties of the finished products all need to be balanced to meet the requirements of the paper machine. However, some properties are relatively more important than others. Figure 2 shows the best applications for various market pulps. The pulps will need to be blended and, at times, layered to optimize use.

THE EUCALYPTUS REVOLUTION

Without a doubt the growth of eucalyptus has been the most striking development in both market and technical terms in recent decades. And the progress continues. Drawing on market data from FisherSovle™, Figure 3 illustrates the sweeping impact of Brazil’s eucalyptus innovations.

Today’s global leaders in market pulp are the Brazilian companies Fibria and Suzano, with between them 11% of the world kraft pulp market (Figure 4). In their quest to produce a eucalyptus pulp that will make better paper, they have researched
the characteristics of the 734 different species of eucalyptus to arrive at what they consider to be:
• Optimum papermaking species
• Optimum soil types for growing the trees
• Optimum growing cycles for the trees
• Optimum pulping process
• Optimum bleaching process

**TWO RECENT MARKET PULP INNOVATIONS**

Eucalyptus is first choice for many grades which require its blend of characteristics, but around the world other producers have been developing new options. Two examples described below are Canfor Pulp and Tembec. Each has created fiber to meet manufacturing demand, functional product attributes and cost benefits.

It is well known that all pulp fibers are not the same. Not only are there variations in the pulp fibers within each type depending on the specific species of wood used and where the trees are grown; but all these fibers also contain variability within their population (e.g., the fiber length of E. globulus ranges from 0.6 to 1.4 mm but is typically reported as 0.99 mm).

Tembec is producing a hardwood BCTMP pulp with a more ribbon-like fiber than a typical straw shaped high yield fiber. This pulp would provide superior bulk, fold endurance, and stiffness for boxboard, printing and writing, and packaging grades. As paper machine technology developed, the company also discovered that it performed very well in middle plies of board and liquid packaging grades, a growing segment, particularly in Asia. Since the BCTMP hardwood was of a short fiber length, it also found a home in fiber blends for the top ply to improve formation and opacity.

According to Tembec, “The high-yield nature of BCTMP always has very high bulk and develops good strength but the strength is typically lower than with chemical pulps. The BCTMP pulp will have high coarseness and will resist collapse. There is also a tendency to have a higher level of fines with this grade. As a result, the grade is used in coated freesheet to improve bulk, stiffness, improve the formation, and lower the porosity. The lower porosity tends to increase the coating holdout.”

The product has also been used in the middle layer of folding boxboard and other packaging grades to increase the folding endurance and reduce the spring back. The bulk and stiffness are also improved. Other potential uses include printing and writing grades to improve opacity, a replacement in toweling products for improved bulk and absorbency.

Canfor Pulp took a completely different direction. Its fiber is strong, with very long, thin cell walls. It comes from white spruce and lodgepole pine grown on the slopes of the interior mountains of British Columbia.

What is unique about this grade is that strength is developed very quickly with low refining energy, and Canfor markets it as a replacement for typical NBSK pulp or...
market pulp fiber

SBSK pulp. In many circumstances, the papermaker is trying to reduce the refining energy to improve drainage or because there is a refining limit as a function of machine speed. These fibers have a high degree of flexibility yet retain their bulk, since refining has been limited.

This product, called Reinforced Fiber Pulp (RFP), is said to be suitable for any product requiring strength, formation improvements, bulk, and improved surface properties. Canfor has also developed an unbleached version that, it says, works particularly well in electrical papers.

Integral to their innovation, Tembec and Canfor Pulp have selected specific species of trees and have developed their own pulping and bleaching processes around their selected species so that both companies are now producing market pulp with desirable properties and functionality using completely different fibers and manufacturing processes.

FROM THE BUYER’S PERSPECTIVE

The most important way to make use of all these potentially highly-useful product differentiators is to match each product to customers who would value them the most — a classic case for the use of market segmentation. Figures 5 and 6, drawn from FisherSolve fiber production, species, and grade data, demonstrate in summary a few of the questions that market segmentation can address: Who is buying the market pulp and how much? What is the production by pulp class? What is the consumption by grade?

So, what do market pulp purchasers need to know to make the best fiber decisions for their customers, markets, mills,
and paper machines? How should they approach the selection process for the “best” fiber for their finished products and their converting customers’ finished products? There are many nuances and exacting details in market pulp fibers. **Figure 7** highlights innovative solutions using Eucalyptus, Tembec’s Hardwood BCTMP, and Canfor Pulp’s RFP in order to bring this subject into light from the pulp purchasing perspective.

Innovative use of raw material fibers can significantly enhance a paper company’s cost competitiveness. **Figure 8** shows that fiber cost (red band) is the largest single component of manufactured product cost.

Selecting the best market pulp for what customers are trying to achieve requires an optimization process involving manufacturing, procurement, and product marketing. Avoiding energy-intensive refining without compromising strength, bulk, porosity, drainage, or fiber flexibility is the Holy Grail that papermakers pursue.

As there is no one single perfect fiber, successful companies have optimized the blending of different pulps to meet the necessary requirements. Normally, at least 15% of a specific fiber must be used to achieve a measurable effect on the finished product. This is where integrated mills are at a disadvantage since a non-integrated paper mill can test and select specific fibers in their furnish mix while integrated mills typically compensate for missing attributes with machine strategies.

Innovative use of pulp fibers is much more than just substituting one fiber for another. It involves replacing existing pulps with a superior pulp and consequently reducing basis weight, reducing coating weights, reducing chemical costs, reducing refining and energy costs, improving drainage, improving strength and reducing breaks, or some other similar benefit. Replacing an existing pulp with a superior pulp makes sense when substitution of this most expensive cost component of the recipe results in improved paper machine operations, allowing for reduced costs and/or superior performing product.

**IN SUMMARY**

The eucalyptus fiber from Brazil, the reinforced fiber pulp from Canfor, and the hardwood BCTMP pulp from Tembec all have desirable attributes and benefits. Understanding the specific benefits of these fibers and optimizing the blends should be in the toolbox of any product technologist and business strategist. As it is quite rare for a market pulp to be used as a single component, this means that they need to be blended with other fibers to produce a superior and optimized product that allows maximum paper machine efficiency, superior customer converting, and a lower cost finished product.

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Federal Regulations Eroding Pulp, Paper Industry Competitiveness

By Donna Harman, President and CEO, AF&PA

If you’ve ever stood on a beach as the waves rolled in and felt the sand wash out, you have witnessed the power of erosion. Unless something is done to protect the shore, wave after wave can dramatically alter the landscape and demolish even the most solid rock over time. Erosion — the power to destroy — is a great metaphor for how the cumulative burden of federal regulations can threaten even an otherwise solid industry.

Despite an admirable record and continued leadership on sustainability, pulp, paper and wood manufacturing is facing just such a threat. New regulation has been followed by new regulation with even more taking effect this fall. Each one hits before the last one has been fully absorbed, creating a cumulative compliance burden that runs into the billions of dollars. Something has to change — and we’re working hard to see that it does.

An honest look at the landscape should make even impartial observers recognize that our industry is a core part of the bedrock of the U.S. economy. The forest products industry accounts for approximately 4 percent of the total U.S. manufacturing GDP, manufacturing over $200 billion in products annually, and employing approximately 900,000 men and women. The industry meets a payroll of approximately $50 billion annually and is among the top 10 manufacturing sector employers in 47 states.

Our success is built in part on our commitment to sustainable manufacturing. Our sustainability initiative — Better Practices, Better Planet 2020 — includes one of the most extensive collections of quantifiable sustainability goals for a major U.S. manufacturing industry. We also use biomass residuals from manufacturing operations to produce bioenergy that provides significant carbon reducing benefits to the environment. Unfortunately, rather than acknowledge this commitment and the unique innovations of our industry federal regulations have disregarded them and put our companies and the employees and communities they support at risk.

One wave threatening our industry is the U.S. Environmental Protection Agency’s (EPA) proposed greenhouse gas regulation of existing utilities. These proposed regulations will limit the types of biomass that can be used for compliance even though the EPA has acknowledged that biomass energy can have climate benefits compared to fossil fuels. EPA’s own revised accounting framework for biogenic CO2 emissions and the accompanying policy guidance released by the agency almost one year ago recognize the carbon benefits from certain forest products manufacturing residuals. This proposed greenhouse gas rule will remain a threat until EPA provides greater certainty about the carbon neutrality of the biomass energy produced and used by our industry.

That wave will be followed this fall by another in the form of a new ozone regulation. As of this writing, EPA’s proposed new rule on ozone would reduce the existing standard from 75 parts per billion (ppb) to between 65 and 70 ppb. This move comes despite the fact that states have not fully implemented the tougher 2008 standards EPA established. This new regulation also fails to acknowledge that air quality has gotten significantly better over the last several years. In our own industry, nitrogen oxide (NOx) and volatile organic compound (VOC) emissions from pulp, paper and wood product mills also continue to decline. At 65 ppb, the paper and wood products industry would be hit with as much as $3 billion in new capital costs necessary for compliance.

Like surf pounding the shore, this series of federal regulations has a massive impact on our industry. That’s why AF&PA has taken such an active leadership role on efforts in Congress to reform the federal regulatory process. We won’t stand by while one unnecessary or poorly defined regulation after another erodes our industry’s competitiveness and helps to collectively impose more than $10 billion in new capital obligations over the next 10 years.

In this Congress, we have worked with members of both parties on four separate regulatory reform proposals. Three of these bills have been passed by the House of Representatives and show that common sense regulatory reform in Washington is possible: the EPA Science Advisory Board Reform Act of 2013 (H.R. 1029), the Secret Science Reform Act of 2014 (H.R. 1030) and the Regulations From the Executive in Need of Scrutiny Act of 2015 (H.R. 427).

We will continue to build on that momentum and will work as long as it takes to protect our industry and the employees and communities it supports from the destructive cumulative power of unsustainable federal regulations.
Strong bonds lead to unique possibilities – in business as well as in chemistry. And that’s precisely why we’ve acquired AkzoNobel’s paper chemicals business. Additional expertise. A broader technology base. Greater presence where you need us most. It all adds up to a winning partnership with a shared commitment to innovation.

We’ve extended our capabilities so you can extend yours. Let’s work together to build value into paper.

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