



Color applications are evaluated under the eye of a microscope during print testing.

New Driving Forces Shape Today's Coated P&W Papers and Packaging Board Markets

Continued growth of electronic media, evolving print advertising trends, developing consumer preferences are changing market dynamics for paper and board producers.

**By Ken Patrick,
Editorial Director**

COMMODITY and specialty paper markets around the world continue to be shaped by changing consumer trends and societal behavior as well as fluctuations in the global economy. Printing and writing papers, especially coated and other specialty grades, and packaging boards for foods, beverages, pharmaceuticals, as well as point-of-sale display/shipping containers are being particularly impacted by today's shifting consumer dynamics.

As has been the case since the second half of the 20th century, print advertising continues to play a dominant role in coated paper markets below the premium sector, including the specialty groundwood grades. Newsprint markets in particular have been impacted by a sustained downward shift in consumer-oriented advertising, while feeling the pinch of Internet reader-drain more than any other printing and writing paper grade.

New and evolving grocery store consumption patterns, notably in the prepared and convenience foods area, are helping to keep some grades in the coated board sector healthy and growing. The popularity of high-volume, discount “warehouse” outlets continues to fuel the growth of specialized containerboards designed for enhanced advertisement-related graphics and labeling.

This article explores some of the newer and on-going forces driving the communication papers and packaging board arenas, more specifically the specialized coated grades. It is based primarily on discussions with some of Thiele Kaolin’s experts in these areas, based on their daily interaction with producers and customers up the supply chain leading to consumer purchases and applications. While the following discussion touches on a variety of topics, it is not intended to be a thorough or complete analysis of current paper and board markets.

Participating in the recent discussions at Thiele’s facilities in Sandersville Ga., were: Eric Tillirson, VP of sales and marketing; Scott Ahrens, marketing manager; Chuck Skinner, senior technical service representative; and Harry Cook, manager, Paper Research and Applications Laboratory.

Coated Paper Outlook. U.S. demand for both coated groundwood and coated free sheet was up for the third straight year, rising at a robust rate of nearly 7% in 2004. Overall consumption of these grades set a new record last year at 11.5 million tons, with the 800,000-ton increase in demand being one of the largest on record.

According to recent RISI figures, the demand for printing and writing papers in North America last year was pretty well balanced with capacity at around 30 million metric tons. In Western Europe, by comparison, printing and writing paper capacity (at some 40 million metric tons) outstripped demand by nearly 15 million metric tons. Projected out to 2008, the North American capacity versus demand picture is still generally balanced at about 33-34 million metric tons, while Western European capacity remains out of balance with demand, similar to that of last year.

The greatest printing and writing papers demand and capacity growth arena during the next decade will be, by far, Asia (especially China) and Eastern Europe, followed by Latin/South America. However, recent RISI projections show capacity in Asia and especially Latin/South America steadily exceeding demand during the next three years, sug-

gesting increased export activity directed toward North America. The primary production cost factors today and into the foreseeable future are wood, labor, and energy costs, in that general order.

Overall print ad spending, according to AF&PA figures, is expected to increase during the next several years, generally tracking corporate profits as it has done since the mid-1980s. From static to slightly increasing, newspaper advertising is expected to be one of the least robust growth areas, with commercial print (catalogues, inserts, direct mail, sales promotions, etc.) being the major winner. Magazines in both North America and Europe have some advertising growth potential during the next decade, especially special interest and customized publications.

Coated Paper Drivers. Producers of the premium No. 1 coated grades of paper were among the first to convert to alkaline papermaking in the 1980s, driven primarily by high bleached fiber costs. Substituting high levels of relatively inexpensive carbonate for very expensive fiber in the wet ends of these paper machines was alone sufficient to push this trend through the remainder of the century, though there were other economic advantages to operating an alkaline machine, and alkaline papers were also found to have increased permanence and library shelf life compared with paper produced under acid conditions.



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—Harry Cook, manager, Paper Research and Applications Laboratory, Thiele Kaolin.

As Cook explains, one of the major trends in this sector following alkaline conversion was the use of double coating, and even triple coating with some of the No. 1 premium and super premium grades. The influx of premium coated grades from Europe in the 1980s and 1990s, including double- and triple-coated papers, “upset some of the rules in North America at that time,” he notes. “We had a very neat little system here, but things began getting a little cloudy as more European papers entered our marketplaces.”

Skinner says that, according to sources in the printing industry, carbonate levels appear to have maxed out in these as well as certain other coated printing grades. It’s been reported that some printers, he notes, are experiencing prob-

lems with printing papers that contain very high levels of carbonate in the coatings. Presses that use acidic fountain solutions, for example, are reporting some difficulty keeping printing plates clean due to foaming and other operating problems.

Cook points out that the higher grade, premium coated paper markets have not really grown much in recent years relative to clay pigment demand. "This is a stable market for clay pigments and our emphasis has not been on development in this area."

No. 1 and primarily No. 2 coated grades are used in annual reports, art books and magazines, select advertising brochures, owner manuals, posters, and as art papers. Typically, coating formulations for these grades will contain 50% - 60% carbonate, 8% - 12% synthetic pigments, and 30% - 40% clay, according to Cook. "There is and will continue to be a stable market for clays in these grades."

Cook and Skinner add that today, especially with merchant grades that go through a "middle man," more No. 2's and No. 3's are being used in lieu of the No. 1 premium grades. The whole coated papers sector is being driven more by costs today than ever before. "Typically," Skinner says, "premium grade orders are fairly small, in cut sizes of 3,000 lb or less."

"Publishers/printers today would like to use a premium coated paper if they could get it approved and budgeted for the job," Cook says. "Although the cheaper grades are generally stocked in-house, they obviously would like to use the good stuff, but costs are prohibitive in most cases."

Ahrens notes what appears to be the recent emergence of "super high quality" printed magazines aimed at elite, special-interest audiences, such as surfers. Similar to *Architectural Digest*, these publications are typically printed on the higher end premium coated papers and are sold at relatively high prices (\$12 - \$15 per copy).

Retail news outlets and book stores generally keep only a few copies of these publications in stock. "It's as though publishers of these magazines have moved out of the one-time-use/throw-away magazine business and are now selling products meant to be kept on shelves for long-term use and reference," Ahrens explains.

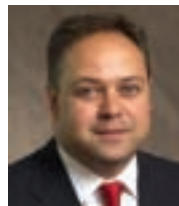
Groundwood Specialties and Newsprint. The growth of supercalendered specialties, including the SC-A pigmented grades, is generally stable, with some slight to moderate

growth in demand and pricing expected during the next few years.

According to Cook, the wave of newsprint machine conversions to SC grades in recent years has slowed, with not too many candidate machines remaining in North America. In the southern U.S., no more than a couple of newsprint machines are potential candidates today.

The key is to be located near a suitable pulp source or have reliable connections to secure a cost-effective supply of pulp suitable for groundwood containing grades, Skinner adds. At least one mill in the southern U.S. tried to use imported eucalyptus fiber to produce No. 5 LWC, but in the end it proved to be too costly, he says.

There currently seem to be no major driving forces active in the North American newsprint market. Tillirson points out that while the electronic media has not yet heavily impacted the print advertising arena, per se, "it just might have already hit newspapers fairly hard. High percentages of people are using online classifieds today, and getting local as well as national and world news via the Internet. Newspaper readership is suffering as a result."



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But while newspaper readership and advertising are being at least somewhat depressed by electronic media, magazine advertising does not appear to be so directly impacted, Tillirson notes. Zenith adspend forecasts, in fact, show print advertising (heavily magazine) increasing between 2004 and 2006 some 5.1% in Europe, 3.6% in North America, and 4.9% in Asia. "The problem, however, is that, globally, capacity for coated printing and writing grades used for this type of advertising is still considerably in excess of demand through 2008."

Cook points out that although the growth of print advertising might have slowed if not bogged down in recent years, many publishers/printers (newsprint and magazines) are charging more for advertising and printing today. "They might have fewer pages or reduced growth in advertising, but their raw material costs are down, proportionally, and

their ad revenues, overall, are up. The quarterly earnings of some printing companies have exceeded those of most paper companies in recent years," he says.

Some other trends affecting groundwood specialty grades include the continued growth of home offices with ink jet printers, although this trend has slowed somewhat in the past couple of years. Also, certain companies have begun discouraging unnecessary hard copies by employees, with some implementing increased "ratioing" of employees per printer, to cut back on the total number of prints made daily. These moves could have a profound impact on grades designed for both laser and ink jet printers.

Skinner notes that an increasing number of today's ink jet papers are size press pigmented grades. These are typically very lightweight papers with little pigment coverage. Only a few could be considered "coated" papers in the traditional sense, he says.



"The consumer food marketplace has become very segmented."

—Scott Ahrens, marketing manager, Thiele Kaolin.

Coated Packaging Boards. Cook notes that currently there is more marketing potential in coated boards than in coated papers, primarily because the demand-capacity balance is better in the coated board sector.

Ahrens points out that in the foods and perishable goods area, the consumer marketplace has become "very segmented." For example, more affluent consumers, he says, are looking for convenience, quality, and maybe some experimental foods. "Perhaps they want to try a fancier food that is packaged in a different way and are willing to pay whatever extra costs may be involved.

"Senior citizens likely look for smaller sizes, convenience, and nutritional, special-diet foods. Small households might be looking for single- and dual-portion sizes, while dual-income, no-children households always on the go typically seek convenience, prepared foods, take-away portions, etc. Underprivileged shoppers are looking for value, economy, and discounts," Ahrens explains.

This segmentation, he continues, leads to specialized marketing toward individual types, development of new packaging approaches, and new challenges for the packaging

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board producers. Overall, this contributes to healthy business for all sides involved, he adds.

According to Cook, a potential growth area is coated linerboard. For more than a decade, warehouse-style retail stores such as Sams, Costco, and Big Lots have progressively used the hallmark large shipping containers on their shelves as marketing tools. "Instead of being just big brown boxes, many of the containers at these stores are white with printed pictures of products inside—typically in operation. A picture of an appliance with a pot roast cooking in it can be a powerful advertisement. It's been proven that this kind of marketing can boost sales by 300%."

Most of these types of containers are currently being made by converters, Cook explains, "who buy container-board from producers and coat it themselves in their corrugated box plants. A few producer mills are also set up to make this highly specialized product."

Skinner adds that white-top linerboard is a "natural" for being subsequently coated. "In general, there are potential cost savings and one area to look at is the needed titanium dioxide. TiO₂ is still needed and, in some cases, a lot is still being used," he says.



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—Chuck Skinner, senior technical service representative, Thiele Kaolin.

New packaging innovations for frozen, microwavable foods have come rapidly in recent years, Tillirson says, and they will continue to be developed almost overnight. "Just take a walk through the frozen food section of any modern grocery store. Many of these can be microwaved and eaten directly from the container. I can also see the proliferation of this packaging every time I take the trash out at home." ■