

Packaging Impressions

2021 State of the Industry Report:
Flexible Packaging Opportunities



2021 State of the Industry: A New Day for Flexible Packaging

For reasons no one could have anticipated, flexible packaging is getting fresh recognition as a solution that makes sense for product manufacturers and consumers alike. Now comes the challenge of capitalizing on that new profile in a changed world.

By Patrick Henry

Although we all may be weary of looking at everything through the dark lens of COVID-19, the pandemic is a good starting point for assessing the state of the flexible packaging industry in 2021.

Shifts in consumer demand brought on by COVID-19 were generally favorable to printers and converters of flexible packaging. Sales of frozen foods, household goods, and many other products sent to store shelves in flexible film containers surged. As people scrambled to stock up on items they feared would grow scarce, their appreciation of the convenience of pouches and other film-based packaging structures also grew.

Shifting this new awareness, the industry doubled down on research aimed at making flexible packages easier to use; nicer to look at; more protective of the product inside; and closer to what consumers expect — from brands and makers of packaging, if not also from themselves — in terms of sustainability.

The carryover of these market forces into 2021 means that “manufacturing in our sector is still way up,” according to Alison Keane, president of the Flexible Packaging Association (FPA). She says that the more diversified a converter’s customer base is, the better the converter tends to do in conditions like these. On the other hand, those skewed to COVID-impacted customers such as schools, colleges, hospitals, and cafeterias have not fared as well.

“As long as you were not heavily into the institutional and commercial side of things, you were making up for it in other areas of the market,” according to Keane.

There were also opportunities specific to the outbreak itself. “In some cases, (converters) have switched assets because of COVID,” notes Keane. “A lot of our film suppliers started making masks, as well as the packaging for the masks, face shields, things like that. Some of the companies started to make packaging for hand sanitizer, where they may not have made those things before.”

And Now?

The question before converters now is whether market activity will return to pre-COVID levels, or whether present conditions represent a new normal for flexible packaging. “A lot of that will have to do with the consumers,” Keane points out. “Do they go back to their normal shopping habits, or do they stay with take-out, delivery, and e-commerce for good?”

The difficulty of charting that trend, if and when it happens, could mean that the industry is facing “at least another year of uncertainty at this point,” she advises.

But converters aren’t waiting for the pieces to fall into place as they try to capitalize on whatever momentum the upsurge in demand may have given them.

Kenneth A. Fontaine, president and CEO of AMGRAPH Packaging in Baltic, Conn., says that although the influx from COVID-19 was real, its effects shouldn’t be overstated. “The pandemic probably has boosted us a little bit, but the trajectory for our industry is for growth,” he says. “I think our whole industry is poised for growth for three or four years.” He adds that AMGRAPH has been enjoying “a good run” in each of the last three years, with 20% growth in 2020 over 2019, and further double-digit



Image courtesy of Poly Print.

Joe Genova (left), owner and vice president of Poly Print Inc. in Tucson, Ariz., with his parents Elsie Genova and Ron Genova, who founded the company in 1992.



From left, Soek Awalia, VP of packaging operations, Pia Simran, VP of sales and business development, and Phil St-Cyr, president and CEO of Rootree.

growth anticipated in 2021.

There's "unpredictability" in some of the markets served by Poly Print in Tucson, Ariz., according to Joe Genova, owner and vice president. But that hasn't stopped the company from investing in its third Uteco 10-color flexographic press, hiring more sales representatives, and expanding capacity in other departments besides the pressroom. Genova says that growth was close to 20% in 2020, and that purchasing commitments from major customers should keep Poly Print growing at a comparable pace this year.

Philippe St-Cyr, president and CEO of Rootree in Burlington, Ont., says the company's underlying strengths were responsible for the 50% year-over-year growth it recorded in 2020. "We had a really, really good foundation that we developed in this market," he explains. "We did not find that it was driven by the pandemic as much as just by our customers increasing, and us making really good strategic partnerships with our accounts. It was just kind of an inevitable growth at that pace."

Smart Play for Packaging

These stories reflect the fact that before the pandemic struck, converters were already benefiting from a trend toward replacing rigid packaging with flexible alternatives. In the wake of COVID-19, flexible formats are making even more sense to consumer goods manufacturers as direct-to-consumer e-commerce transactions account for ever-increasing shares of their business.

St-Cyr notes that the shift didn't happen overnight: material handling and co-packing lines were principally geared to rigid structures, not bags and pouches. But now, he says, flexible packaging is recognized as "a really simple solution" that uses fewer resources and saves manufacturers money by reducing the need for secondary packaging.

"Flexible packaging is the most economical form of packaging available today," Genova says, pointing out that it has the lowest tare weight — the weight of the container alone, minus contents — of all types of packaging, along with the lowest unit cost.

This has obvious advantages for shipping, according to Genova: compact flexible packages containing the same

volume of product as a corresponding number of glass jars might take up only 10% as much space as the jars in a delivery trailer. He thinks now that consumers' awareness of shipping costs has been sharpened by their stepped-up online purchasing, they'll come to appreciate the weight-saving economy of flexible packaging as much as B2B shippers do.

Fontaine has compiled a long list of endorsements for flexible packaging. "It's source reduction, in the amount of materials it takes to make the package. The films and the types of printing you can do are usually more vibrant, so that you can have a better-looking package. Their functionality is great, with fitments and zipper packages that are reclosable. And the carbon footprint is substantially smaller than rigid packaging."

One limitation is that flexible films aren't as recyclable or compostable as other packaging materials. But Fontaine says this has to be weighed against the fact that flexible packaging represents only about 2% of all solid matter in landfills. This is a far smaller percentage than food waste, a problem that Fontaine says portion-controlled flexible packaging is helping to reduce.

The View from Academia

From his post as associate professor in the Department of Food Science and Human Nutrition at Iowa State University, research scientist Keith Vorst is seeing the same things the converters see as the main forces behind the rise of flexible packaging.

"Most of it is efficiency and cost," he says. "We've seen products move out of rigid into flexible for the ability to pack, collapse, and move them. Pre- and post-COVID, we're becoming more aware of transport, and convenience is driving a lot of it as well. We see a lot of stuff moving to a convenience format. Space is critical, and many times, we can get more space out of flexible."

Vorst directs the department's Polymer and Food Protection Consortium, an industry-supported initiative for improving the design, safety, functionality, and recyclability of food packaging. This gives him a special vantage point into advancements in flexible films and packaging, including applications featuring what he describes as "some really incredible recent technology."

"We are working with a lot of companies that have engineered and designed film structures that have properties that previously were unachievable without a glass or metal structure," says Vorst. "Every six months, I see some new feature, some new structure. That's enabled flexible to move into some of these previously untouchable markets for rigid."

Some of the developments are coming out of Vorst's own laboratory, which looks for ways the packaging supply chain can extract value from discarded plastics instead of consigning them to landfills.

He and his team have come up, for example, with a way to make containers formed from recycled plastics, which

filter wavelengths of light that cause meat to discolor while it sits in store coolers. On a related front, the group has filed a patent for a solvent-free, bio-based packaging adhesive designed to eliminate migration issues.

CAPEX with Confidence

Technologies for printing and converting flexible films are advancing at the same pace, and packaging producers, for the most part, haven't hesitated to invest in them.

Genova says that thanks to “tons of innovation in prepress,” his Uteco Onyx presses routinely print films at 175 lpi, and can achieve “almost photo-like printing” at line screens up to 225 — a print resolution once unheard of for flexography.

The Onyx he installed at Poly Print last September was part of a \$5.5 million capital expenditure program that also included a regenerative thermal oxidizer, a furnace that captures and destroys VOCs from solvent-based flexo inks. 2021 will see the addition of a new slitter, as well as plant-wide systems for “better, more honed-in quality control, and less waste,” according to Genova.

AMGRAPH doubled its capacity by opening a plant in Watertown, Conn., toward the end of 2019. The centerpiece of the operation, says Fontaine, is a 10-color Windmoeller & Hoelscher flexographic press that prints with both solvent- and water-based inks. The Watertown plant also has an adhesive lamination line, and will soon add an extrusion line and a pouch making system.

The headquarters plant in Baltic, which has gravure capability in the form of an eight-color BOBST Rotomec supported by an EB curing line, will install a Drent Goebel web offset press. Fontaine adds that he is investigating the Landa W10 Nanographic digital web press for flexible packaging, attracted by the “brilliance” of its nanoparticle inks and the short-run, variable-data applications it makes possible.

Rootree made news in 2016 by installing Canada's first HP Indigo 20000 digital press for flexible packaging. It earned another headline the following year by becoming the first converter in North America to adopt HP's Pack Ready Lamination system as one of its solutions for adhesive-free, short-run thermal pouch making.



Image Courtesy of Poly Print.

Poly Print's 10-color Uteco Onyx flexographic presses print flexible films at resolutions up to 225 lpi.

With a second HP Indigo 20000 installed in 2018, Rootree gained the capacity to produce 50 million preformed pouches a year, according to St-Cyr. He says he now has his eye on an HP Indigo 25K, a digital web press designed for labels and flexible packaging.

Less Inflexible Attitudes?

The flexible packaging industry is fundamentally sound, and its post-COVID-19 prospects are excellent. But converters will still have to deal with negative environmental perceptions of the products they make, along with the marketplace reactions that adverse publicity can bring.

The good news here, according to Keane, is that COVID-19 has softened some of these unfavorable attitudes. “The silver lining of the pandemic is that it has informed the consumer of what the packaging supply chain has known all along: we really need packaging. The change has been that we still want to see less packaging, less waste, and more recycling, but we understand the need for it better up front.”

Keane says that as a result, the industry is seeing fewer bans and “de facto bans” — penalties for non-compliance with mandated rates of recycling — in 2021 than previously. This could open the way to a new, more cooperative strategy: “We need to find a way to incentivize less packaging and fund infrastructure so that all packaging can come to full circularity. Consumers understand the need for it now, and we're hearing less talk about getting rid of packaging.”

The pandemic has changed attitudes in another way, adding a new layer of expectation to what consumers want in the packages they bring home.

Keane says that despite there being “literally no evidence” that packaging surfaces transmit the SARS-CoV-2 virus, some consumers evidently fear otherwise. Last year, a survey by a marketing firm working with the FPA found that 66% of respondents were at least somewhat apprehensive about contracting COVID-19 from food packaging. Close to half (44%) said they cleansed their food packaging with a disinfectant.

“That is still definitely a concern,” says Keane. According to the marketing firm, the responses suggest that packaging safety could rise to the same level of importance as sustainability in consumers' minds.

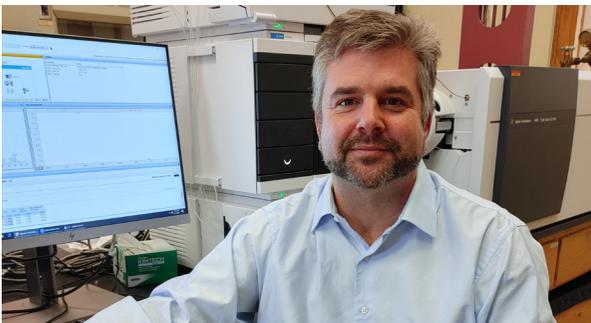


Image courtesy of Keith Vorst.

Keith Vorst, Ph.D., is an associate professor in the Department of Food Science and Human Nutrition at Iowa State University. He also directs the department's Polymer and Food Protection Consortium.

Consumers, It's Up to You

Vorst counsels that it won't be easy for flexible packaging to overcome misunderstandings like this. He also insists that when consumers complain their desire for sustainability isn't being fulfilled, they should recognize themselves as one of the obstacles.

"The biggest problem I have with folks who are not in the industry, or do not have knowledge of polymers, paper, recycling, and plastic packaging, is that they always want to say of a lot of our flexible packaging material, 'It's not recyclable,'" Vorst asserts. "Well, that's just not true. It's recyclable, but it's not recycled. There's a big difference."

A lack of realism compounds the problem. "Consumers want it all — they want the anti-gravity device as far as packaging is concerned," Vorst says. What they don't want is to become active recyclers who support efforts the industry is making to create the technologies and infrastructures that make truly sustainable packaging manufacturing possible.

The packaging industry, he emphasizes, "is trying to find solutions that consumers are willing to adopt." But, it is an uphill struggle. "We don't want to be inconvenienced by our packaging. The industry has solutions. Consumers don't want to pay for them."

A way to share the cost equitably, according to Keane, may lie in infrastructure development based on fees that

states collect through extended producer responsibility (EPR) programs. EPR puts the responsibility for post-consumer product management onto the producer, factoring the cost of waste reduction, recycling, and other steps into the market price of the product.

"If done right, (EPR programs) are a great way to raise a lot of money, and to invest that money in advanced recycling, or tweaking mechanical recycling so that it can take more flexible packaging," says Keane. Doing it right, she adds, means not merely reimbursing the cost of recycling of rigid containers in existing facilities, but building new infrastructure that accommodates "all the packaging that's being used today."

No state has yet created an EPR program targeting packaging, but environmental zeal and the need for new sources of revenue increase the likelihood that some of them eventually will. The FPA hopes to find "one good model" of an EPR program that it can stand behind, says Keane, adding that under the right scheme, converters will not be the ones to bear the financial burden.

"In the end, consumers pay for it," she explains. "Generally speaking, the brand is the responsible party. It's going to be the brand owner who will pay into the system based on what they sell in a given state. The consumer won't see it, but they'll pay through the price of the product — as it should be." ●

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