



Paperboard Packaging for Pickles Proliferates

...and why that helps timberland owners

The Pulp and Paper Mills

Pulp mills are important for timberland owners—not because they pay high prices for wood (they don’t)—but because they consume large volumes of small or low-grade logs. This provides markets for trees removed in thinning operations and other timber stand improvement projects. Other mills that use this type of material (particleboard or pellet plants) just don’t consume the volumes that pulp mills do.

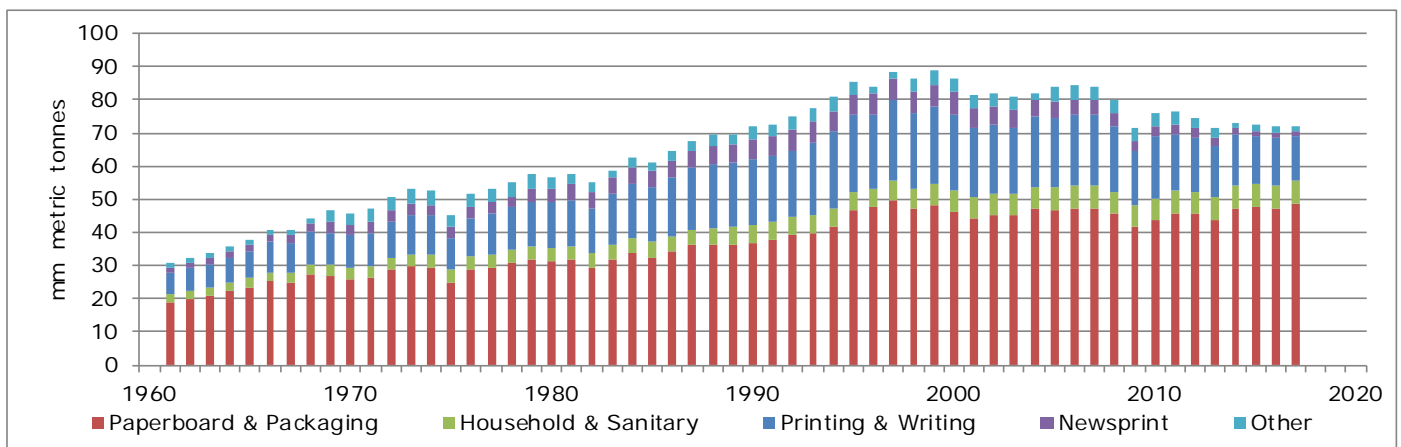
So, we want pulp mills near our timberland, and we want those pulp mills to be part of a pulp and paper complex—because consumers don’t want pulp, they want things (like paper) that are made from pulp.

But, “everybody knows” that demand for paper is declining. So what will we do with our small and low value material when all the pulp and paper mills close?

As is often the case, what “everybody knows” is not quite correct. Figure 1 shows that total paper and paperboard production has indeed been declining in the US for the past 20 years. Newsprint production has nearly disappeared (down 82%, see Table 1)—but it was not a large segment of the US industry in the first place (8% in 1998). Printing and writing paper production has declined by 40% and has dropped from 26% of total production to just under 20% in 2017. But packaging paper and paperboard production is up 3% and household and sanitary paper is up 16%.

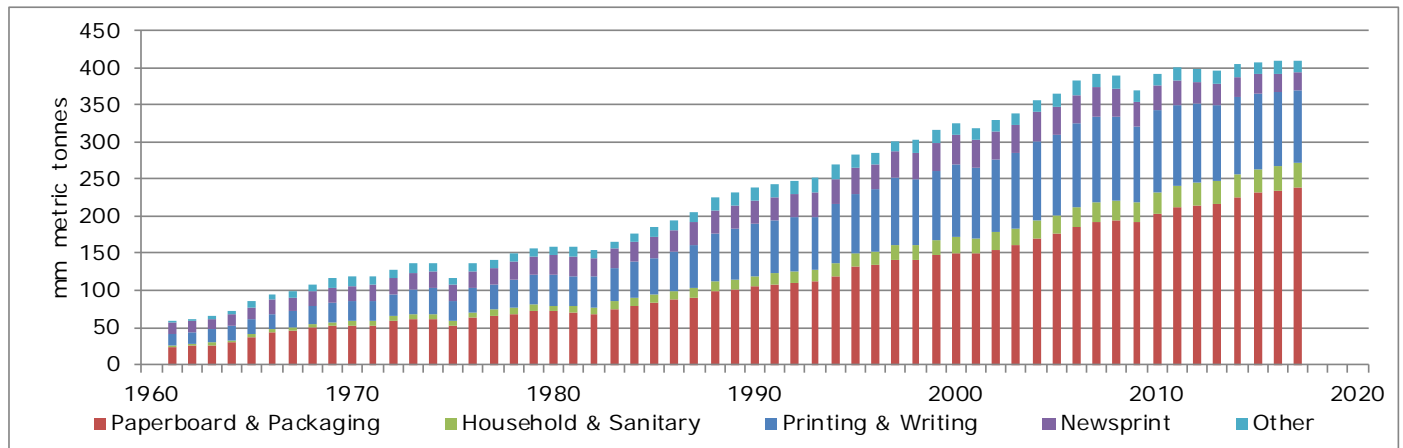
The rest of the world has seen stronger growth in paper and paperboard production. While global newsprint production has fallen 37% (Figure 2 and Table 1), total production is up 36% and packaging paper and paperboard is up 68%.

Figure 1. US Paper and Paperboard Production



Source: UN FAO

Figure 2. World Paper and Paperboard Production



Source: UN FAO

Table 1. Paper and Paperboard Production Statistics

| | Total | Paperboard & Packaging | Household & Sanitary | Printing & Writing | Newsprint | Other |
|------------------------------------|-------------|------------------------|----------------------|--------------------|------------|------------|
| US | | | | | | |
| metric tonnes | | | | | | |
| 1998 | 86,469,000 | 47,104,000 | 5,974,000 | 22,651,000 | 6,577,000 | 4,163,000 |
| 2017 | 72,044,539 | 48,610,487 | 6,937,314 | 13,546,628 | 1,194,713 | 1,755,397 |
| Change | -16.7% | 3.2% | 16.1% | -40.2% | -81.8% | -57.8% |
| % of Production | | | | | | |
| 1998 | 100% | 54% | 7% | 26% | 8% | 5% |
| 2017 | 100% | 67% | 10% | 19% | 2% | 2% |
| World | | | | | | |
| metric tonnes | | | | | | |
| 1998 | 301,955,942 | 141,624,344 | 19,473,567 | 88,958,716 | 36,198,092 | 15,701,223 |
| 2017 | 410,324,256 | 237,638,965 | 33,937,045 | 99,002,124 | 22,970,756 | 16,775,366 |
| Change | 35.9% | 67.8% | 74.3% | 11.3% | -36.5% | 6.8% |
| % of Production | | | | | | |
| 1998 | 100% | 47% | 6% | 29% | 12% | 5% |
| 2017 | 100% | 58% | 8% | 24% | 6% | 4% |
| US as % of World Production | | | | | | |
| 1998 | 29% | 33% | 31% | 25% | 18% | 27% |
| 2017 | 18% | 20% | 20% | 14% | 5% | 10% |

Source: UN FAO

[Note: Both US and world production have been more-or-less level since 2010, but packaging production has been increasing.]

One of the demand drivers for packaging grades is the explosion in online shopping and home delivery. All those things that are ordered online arrive in paperboard boxes with various types of packing material protecting the product inside the box. We recently encountered a home-delivered

package that included a large amount of paper packaging material inside.

The Pickle

We have a family member that prefers a particular store-bought dill pickle—Vlassic’s whole kosher dills in the 32 ounce jar (Figure 3).

Figure 3. The Preferred Pickle¹



The Problem

Our local grocery stores have stopped carrying the 32 ounce jar of whole kosher dills. (They still carry other types of Vlasic dill pickles, but our family member insists they are just not as good).

The Purchase

We recently discovered that Walmart carries the 32 oz jar and we can have it delivered to our house. The pickle jars are shipped in groups of six.

The Package

Two days after placing our order, the box in Figure 4 appeared on our front porch, courtesy of FedEx. The box is a layer of corrugated medium sandwiched between two layers of linerboard.

Figure 4. The Pickle Package



It is a little difficult to tell from Figure 4 just how big the box is, so we show you the box and a jar of the pickles in Figure 5

Figure 5. The Package and a Pickle Jar



The Packaging

The first layer of packaging inside the box was brown paper (Figure 6):

Figure 6. Pickle-Protecting Paper



The pickle jars were under this paper, wrapped in a paper mesh that would help protect the jars from each other and prevent breakage (Figure 7).

¹ The use of brand, store or delivery service names is for illustration only and not intended as a recommendation or endorsement by the Forest Research Group.

Figure 7. The Next Layer of Pickle Jar Projection



Inside the paper mesh was a plastic bag that would reduce the amount of mess if one of the jars did manage to break.

The next picture summarizes the layers of protection around each jar (Figure 8).

Figure 8. Progression of Pickle Protection Layers



The final picture (Figure 9) shows the six pickle jars outside the box (which is filled with the packaging materials). (It looks like the box would have held 36 of these pickle jars if packed in tightly without padding.)

Figure 9. Volume of Pickles vs. Volume of Packaging



Summary

The boom in online shopping and home delivery is boosting the demand for packaging papers and paperboard. Whereas a trip to the grocery store would have resulted in the six pickle jars being packed in to 2 or 3 plastic bags (or reusable cloth bags), the home-delivery shipment came in a large corrugated carton with lots of paper-based padding.



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