

Paper or Plastic

Pinot Plastic

Eric Arnold, 07.24.08

The process of making wine is, for the most part, environmentally friendly, with minimal carbon output. Shipping millions of glass bottles to wholesalers, retailers, restaurants and consumers around the world? Not so much.

Shipping wine is more about shipping glass with a little bit of wine in it. Glass--despite being cheap, easy to produce and easy to recycle--is very heavy and racks up the carbon-emission counts during transportation. Plus, the shape of a bottle doesn't lend itself to tight, orderly packing on a large scale.

All right, but how much of an impact on the world can wine possibly have?

A lot. According to an October 2007 study from the American Association of Wine Economists*, the production and distribution of wine is responsible for roughly 6.3 billion tons of greenhouse gas emissions, or nearly 1% of global emissions annually. That's equivalent to the emissions generated by 1 million passenger cars each year, with nearly all of that impact coming from the transportation of the wine, not the production of it.

There are better options than glass bottles. But wine-makers, wedded to deep-rooted traditions and obsessed with perceptions, are merely tiptoeing into the world of alternative packages like paperboard Tetra Pak cartons and plastic bottles. And when it comes to wine, plastic is greener than glass.

"There is the perception of plastic that comes from water bottles, but the difference is, water comes from your tap and wine doesn't," says Patrick Egan, innovation and brand manager for the French Rabbit wines,



which come in Tetra Pak (the same cartons you see for soy milk, chicken stock, coconut water, etc.). The French Rabbit wines are produced and packaged by French wine company Boisset Family Estates. Boisset is also the producer of Yellow Jersey, the first wine that will be available in a 750-milliliter plastic bottle when it is launched in the U.S. later this summer.

"We looked to see how much wine we actually ship and how quickly it's consumed and what the environmental cost is of getting the wine all over the world," says Egan. "Plastic does take petroleum to produce, but significantly less than it takes to produce glass." And the company can fit more plastic bottles into a single truck or container because there's no extra padding needed to keep the bottles from breaking.

Despite the advantages of alternatives, the days of glass are by no means numbered. At the high-end segment of the market, the wines are meant to age for years or even decades. Nobody know if the wines will perform to the same standards when packaged in paper or plastic, and neither Tetra Paks nor plastic bottles are as sturdy as glass. Or, at least, neither has had the chance to prove itself yet.

“We have Grand Cru Burgundies that people want to keep for 15 or 20 years, and those don’t necessarily belong in a package that’s not meant to last that long,” Egan points out. Instead, he says the strategy is to offer more choices to consumers over time.

“We don’t want to eliminate glass because it’s important for a certain segment of the market”—such as Boisset’s \$175 bottle of Grand Cru Chambertain. Can you imagine that wine in a Tetra Pak or plastic bottle? (Well, you never know—in 2005 this became the first Grand Cru wine to be bottled with a screw cap in lieu of cork.)

Despite Boisset’s reluctance to give up on glass entirely, the company is largely seen as the leader in embracing alternative packaging for wine. It started with French Rabbit and later extended its Tetra Pak use to several other brands, including the well-established Bouchard Aîné for the winery’s Bourgogne-level (lower-end) pinot noir.

The cartons are rectangular and easy to pack, meaning more wine can fit in one container, be it a truck or a ship, with less wasted space. The company also claims that the savings in shipping have allowed it to use a higher-quality, better-tasting wine than it could have otherwise.

“If you think about it from the standpoint of a winery, you can get the same amount of wine in 40% fewer trucks in our packaging, compared to glass bottles,” explains Ed Klein, Tetra Pak’s VP of public and environment affairs. “The recycling grade for our cartons is lower”—not all curbside programs will take Tetra packaging, which is recycled similarly to paper—but they are so much lighter that even after you take into account the recycling rate, about 10 times less weight is going to the landfill from cartons than from glass.”

In a 2006 study prepared for Tetra Pak by a third-party consultant, the company learned that for 1,000 liters of

wine produced for U.S. consumption, 333 pounds of carbon is emitted. For 1,000 liters in glass bottles (roughly 111 cases), it’s 1,916 pounds of carbon.

By Boisset’s assessment, the carbon footprint associated with a plastic wine bottle is roughly half that of a glass one, never mind the fact that plastic is also cheaper. Should Yellow Jersey, \$10, prove popular with consumers, it could do for the plastic wine bottle what French Rabbit did for the Tetra Pak.

Since the introduction of French Rabbit, there are now more than 70 other wine brands sold in Tetra Pak. But there’s still a long way to go—there are thousands of wine brands available in America alone. It’s not that winemakers are unaware of the environmental benefits of paper or plastic, it’s that they struggle with the impact of perception. Ten years ago, as wineries began to seal bottles with screw caps instead of corks, there was an initial backlash before a long, slow period of acceptance that, some would argue, remains ongoing.

“We’re managing change,” says Tetra Pak’s Klein. “These things don’t happen at the snap of a finger.”

* From *Red, White and ‘Green’: The Cost of Carbon in the Global Wine Trade*, by Pablo Páster of URS Corp. and political scientist Tyler Colman, Ph.D. Coleman is also a Forbes.com contributor.