

FOOD AND ENGINEERING
Less waste, more innovation saluted in DuPont Awards



Posted: July 1, 2010

The single-serve market has eluded US winemakers, despite efforts by some of the largest producers. This year, a combination of French technology and American ingenuity conquered the challenge with a sophisticated lidding system and stylish PET glass. In recognition of this accomplishment, the 2010 DuPont awards conferred silver status for innovation on Copa, a brand created by OneGlassWine US, The Dalles, OR.

The French connection is Pascal Carvin, engineer and inventor of a controlled-atmosphere, vacuum-seal filling and lidding system that emulates the gentle handling and purity of an aseptic filler. When he formed OneGlassWine in 2004, Carvin only used specially processed glass in his machine, but last year, he added PET glasses to the mix. Spurring the change was James Martin, an Oregon winemaker who formed a partnership with him in early 2009. Carvin's largest filling machine was shipped to Oregon and set up at Sunshine Mill in The Dalles. The system has four sealing heads and can fill up to 2,000 units an hour. The mill now doubles as a production facility and a showroom for Carvin's technology.

While specially treated glass can be filled, "it's more challenging, and you have a higher failure rate" with lids that are not airtight, says Martin. "PET is a much greener way to go." He spent last year developing a 38-gram cup with a rim more typical of a wine glass than a conventional PET glass. "No tooling in the world existed for this type

of plastic,” Martin explains. He worked with Resilux America LLC to create the mold. “The rim and thicker walls that make the glass feel more substantial in the hand is critical for a quality wine experience.” He also worked with a German firm to develop a screened printing process to print directly on the plastic’s curved surface, using UV inks and a multi-color process.

The result is the Copa cup, a 6.3-oz./187ml serving of wines a few notches above the 187ml splits that air travelers know. Martin is filling glasses with his own wine, but other Oregon winemakers are interested in having their products in the high-barrier Copa cups, as well. “We’re a copacker with a mission,” he says. “We want to see more premium products in this package.”

Oregon start-up Copa di Vino won Silver for its single-serve PET wine glass.

Food and beverage containers garnered half of this year’s 16 DuPont awards. Innovation, sustainability and waste reduction were the judging criteria. Top honors went to Exal Corp., developer of high-speed coil-to-can (C2C) aluminum-bottle shaping technology, and Alcoa Rigid Packaging, supplier of the 3000 series alloy used in the process. While other aluminum bottles are extruded from slugs, C2C forms bottles from heavy-grade sheets, reducing finished weight by about a third, according to Ed Martin, Exal’s business development manager, and bringing cost in line with PET bottles. Eska water was the first all-aluminum C2C application (“Lifestyle-specific containers,” Food Engineering, April 2010). A crown version from Montreal’s Blue Spike Beverages Inc. preceded it for Octane 7.0, a high-octane alcohol-and-caffeine beverage.

PepsiCo received a gold award for a fully compostable bag for SunChips. The film is made from starch-based polylactic acid resin. Frito-Lay added compostable adhesive and an inner oxygen barrier this year. The bags break down in a compost pile in 12-15 weeks.

Other food packaging winners include Coca-Cola Co. for a PET container with up to 30 percent plant-based resins that can be recycled with petroleum-based PET; Sealed Air’s Cryovac division for anti-fog shrink film for MAP packages and a Grip & Tear feature for vacuum shrink bags; Berry Plastics and Rexam for shelf-stable, single-serve Healthy Choice packaging; and Kellogg Co. and Positive Packaging-India for a metalized film laminate to address moisture barrier and off-gassing issues with cornflakes.

