



SUSTAINABILITY GUIDE

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WINE'S CARBON FOOTPRINT

It's Tricky Bottling Wine Eco-Consciously

When we visit our local wine shop searching for that perfect bottle for the dinner table or for a gift, many consumers care about the label and the overall appeal of the packaging. And human nature is that the weight of the bottle and a deep punt makes the wine feel more special or valuable. For those of us that care about being eco-friendly, when we pick up that bottle, I do not suppose we are thinking about the considerable carbon footprint of that wine.

The path that bottle takes to the dinner table has a substantial footprint. This includes the effects of manufacturing, resources and transportation costs. And so often after we drink the wine, the bottle is simply thrown away.

Should wine bottles shrink in size to reduce their carbon footprint? Wineries have certainly made huge inroads with pesticides and fertilizers, but if you're making a nice Napa Cabernet, your marketing team would never agree to put that special wine in a dinky bottle.

Scott Lindstrom-Dake, owner and winemaker of Healdsburg-based Thumbprint Cellars, is very progressive and mindful of the environment, but is also realistic in his perception that wine bottles will not be shrinking anytime soon. "While it's a topic of conversation, the consumer wants to see good glass and a thicker punt," he opines.

Lindstrom-Dake uses medium weight bottles for his \$45 Thumbprints that are produced in Tracy, California, and cost about \$9 per case. But for his "Sculptured" brand that retails for \$125, he uses very thick glass that is produced in France and costs double the amount that he pays for the glass used for Thumbprint.

By Jonathan H. Newman



ONE GREENER ALTERNATIVE COULD BE KEGGING

Dan Donohoe owns and operates Napa-based Free Flow Wines, a packaging and logistics company that produces wine kegs. His clients include Frog's Leap Winery, Sonoma-Cutrer and Caymus, kegging their wines for on-premise accounts like Shake Shack, the Coliseum at Caesar's Palace and the Starr group restaurants in Philadelphia.

Donohoe is passionate about kegs and believes that alternative packaging is the wave of the future. In this regard he points out that "there's no cork taint, no oxidation, no spoilage and it's very green."

Another aspect of the wine bottle that is likely not changing anytime soon is the weight. When marquee producers put their wine in monumental packages, the new guy cannot afford to skimp and buck the trend. Innovations in packaging for lower-end, off-premise wines and restaurant packages will continue to evolve, but for now, ultra-premium wineries must follow consumer perception.

JONATHAN NEWMAN is widely recognized as a leader in the wine industry. As chairman of the Pennsylvania Liquor Control Board, he was the nation's largest wine buyer and brought a number of popular innovations to bear, including the Chairman's Selection program and opening of local stores for Sunday sales. Jonathan has received significant industry accolades during his career. Follow him on Twitter at @NewmanWine and visit his website: www.newmanwine.com.



SELLING SUSTAINABILITY

How to Boost Sales of Eco-friendly Beverage Products

Going green isn't a new concept, but it continues to gain momentum in the beverage industry.

Eco-conscious consumers seek out products that are both great tasting and also good for the environment. As a result, both on- and off-premise operators need to understand the various differences among sustainable products, and also be able to market those products effectively to consumers.

WHAT MAKES A PRODUCT SUSTAINABLE?

One challenge related to green beverage products is that the terms "green" and "sustainable" mean different things to different people. Also, a product can be sustainable in one way and not as green in another.

For example, a wine may be produced using grapes from a vineyard that uses sustainable farming practices, but it could still have added preservatives or sulfites. Therefore, it is technically not organic.

In order to be classified as organic, a product must meet certain standards set by the U.S. Department of Agriculture. For wine, a product may be labeled as being made from organically grown grapes, or the label may specify that the wine is made with organic grapes without any added sulfites.

Pesticide use in wine can be even vaguer and more difficult to understand. For example, the use of copper

as an additive is considered to be sustainable, because it's an organic substance.

"Biodynamic" is another term used to describe how wine is produced using farming methods which do not utilize chemical fertilizers or pesticides, and also takes lunar cycles into consideration. Other wines are dry-farmed, meaning that vine roots are forced to go deeper into the soil, thereby producing more-flavorful grapes.

Then there's the general "sustainable" term, which refers to a variety of practices that may include farming, packaging, locality and social responsibility initiatives. Reputable wineries will include detailed information about a product's ecological footprint on the label, better clarifying the different levels of sustainability.

As far as other beverage categories – such as beer and spirits – green products aren't as easily available. Or at least not yet. Many craft breweries and distilleries source local and organic ingredients for their products, which are generally touted on the label.

Consumers can also select more environmentally friendly products based on packaging by buying beverages that come in more easily recyclable materials.

CONSUMER EDUCATION MEANS SALES

With so many variations of green products from which to choose, it can be difficult for operators to promote

these specific qualities to their customers. Educating staff on the different types of sustainable products available is a must, but it's also important to grab a customer's attention in case employees fails to strike up a conversation with an employee.

In order to highlight your environmentally conscious products, effective displays are essential. Not only should the products be showcased in an eye-catching way, but their green characteristics also need to be easy for customers to recognize and understand.

At Bay Ridge Wine and Spirits in Annapolis, Maryland, each product is highly scrutinized and evaluated for its farming methods before making it onto store shelves. Currently, 40% of the retailer's wines are considered sustainable.

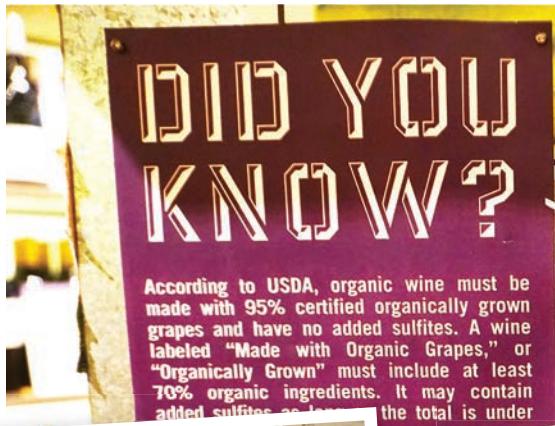
"As a buyer, sustainable products are important to me," says Katie Harpe, Wine Buyer at Bay Ridge. "When deciding to partner with a new place, sustainability is one of the main things we look at."

"Our commitment to sustainable products is one of the things people really like about our store," she adds.



Keys are displayed throughout Bay Ridge Wine and Spirits in Annapolis, Maryland, alerting customers to different sustainable varietals available.

An advertisement for Bota Box wine. The top half features a large, stylized logo with the word "BOTA BOX" in white letters on a black background. Below it is a circular graphic containing a recycling symbol and the text "THE ORIGINAL ENVIRONMENTALLY-FRIENDLY BOX". The middle section shows three Bota Box products: Cabernet Sauvignon, Pinot Grigio, and a smaller Chardonnay "MINI" box, all resting on fallen leaves in a forest. To the right, there's a yellow sidebar with the text "the BEVERAGE INFORMATION GROUP" and "GROWTH BRANDS". The bottom right corner contains the text "2016 GROW BRAND AW" and "#16 Revenue B Fastest Grow Top-20 Bran". The bottom left corner includes the text "35 Wine Enthus Best Buys Since" and "Nielsen, TtI FDL+, 26 W/E 0".



Harper takes special care to educate consumers on the differences among various wines. She cultivates a detailed guide for each wine for sale in the shop, which explains what "sustainable" actually means for each product.

Small keys are displayed on shelves throughout the store, alerting customers to the different sustainable varietals of wine available. The keys provide useful information for customers coming into the store seeking organic or biodynamic wines, making it easier for people to see everything Bay Ridge has to offer in the area of sustainability.

For customers who are not as informed about these products, the keys act as a natural conversation-starter for staff, and ultimately help the store sell more wine.

"You generate higher sales and also help educate the customer on responsible farming," Harper explains. "Sustainability is really important to good buyers, so it's

become more important to the customer as well. More and more wineries are going in this direction because it definitely affects the quality of the wine."

Bottlerocket's Wine & Spirit in New York City has a unique way of displaying products thematically. In addition to showcasing wine on a long wall in a more traditional way that's organized by region, various island displays are located all around the store that allow customers to search for wine thematically – such as by green products. The design is so innovative that Bottlerocket had it patented. The company's website is organized in a similar fashion.

"We've created a design that really meets people where they are," explains Tom Geniesse, Bottlerocket owner and founder. "Choosing a wine can be a little daunting and confusing for people. Our display system doesn't dumb it down, but we provide a launch pad for them."

In addition to listing a product's name and price, Bottlerocket displays also include other details that Geniesse likens to "the bartender's information" (what foods the wine best pairs with, etc.) and "the sophisticated consumer's information" (tasting notes, etc.).

"We definitely identify wines that are biodynamic, organic or sustainable in the way they are formed," Geniesse says. "It's valuable and important information."

Jimmy Hamilton is the General Manager and Sommelier at Legacy Wine and Spirits, located in Little Rock, Arkansas. He's currently working to develop a new store display that will easily allow customers to browse all of Legacy's sustainable wines. Hamilton believes that customers seek sustainable products for a variety of reasons, and he hopes that the new display will make it easier for green-minded consumers to identify the types of products they're interested in.

QUICK SALES TIPS

What are the key things to remember in order to successfully develop and market a sustainable beverage line in your operation? Here are some main takeaways:

KNOW YOUR PRODUCTS. Remember, there are major differences among products touted as "organic," "biodynamic" and "sustainable." Make sure that you and your staff understand the differences when selecting which products to carry, and when articulating these product details to customers.

UNDERSTAND THE BENEFITS. In addition to knowing how a product is made, take the time to find out why that's important. Does a product have a health benefit? Is all packaging recyclable? Does the product supplier support fair trade business practices? Is the product entirely locally sourced? Consumers want to know the effects of the green products they support, so make sure you can clearly articulate them.

EDUCATE YOUR CONSUMERS. A prominent display showcasing green products is important, but remember that customers may be confused about what exactly qualifies as green products, and why this is important. Incorporate some product detail into your display, or have this info easily available for customers to review.

{ Advertorial }

The Wente Family Remains Dedicated to its Stewardship of the Land

Since 1883, five generations of the Wente family have planted, grown and harvested fruit from their estate vineyards. After more than a century of committed stewardship of the land, the fourth and fifth generations continue to lead the way in protecting the legacy and ecological health of the family's estate vineyards.

"These vineyards are our legacy to our children—the fifth generation of the Wente family and beyond—and we make every effort to preserve what nature has so generously provided."

Phil Wente, Fourth Generation Winegrower

The family's *Farming for the Future* program—created with the health and well-being of its employees, the local community and the planet in mind—is a system of practices that enhances the vitality of the soils, creates a balanced, sustainable ecology, minimizes water use and reduces non-organic wastes. The initiative extends throughout the organization, including their estate wineries, The Restaurant at Wente Vineyards, The Concerts and every other aspect of their operations. The Course at Wente Vineyards is a certified Audubon Cooperative Sanctuary, focused on conserving and restoring natural ecosystems and habitats for birds and other wildlife. Fifth Generation Winegrower Karl D. Wente says, "Sustainability has been a huge part of my family's history here and it's what we're all about."



"A lot of times customers will come in having done more research on the products than the sales associates have, but you still need to do as much as you can to make it a smooth decision-making process for them," he says.

Hamilton touts health benefits as one of the main reason his customers seek out sustainable products, in addition to their desire to go green. Pointing out the health benefits of organic products is another display method to consider in your store.

"People are looking to be healthier, even with

"WE DEFINITELY IDENTIFY WINES THAT ARE BIODYNAMIC, ORGANIC OR SUSTAINABLE IN THE WAY THEY ARE FORMED. IT'S VALUABLE AND IMPORTANT INFORMATION."

*—Tom Geniesse,
Bottlerocket owner and founder*

their wine. They're looking at sulfates and are in search of products with a lack of sulfates and that are organic," Hamilton states. "We have a few products in our store that have zero sulfates added, and they're supposed to be good for people who get migraines. Most wines that claim to be organic in the United States are organically grown, so sulfates are added as a preservative. For any high quality wine, you want to add as few sulfates as possible. The 'Big Box' boys who favor quantity over quality produce larger batches of wine, and therefore need to add more sulfates as a preservative, which affects the taste."

Geniesse agrees. "People are trying to live healthy, sustainable lives, and green wine capitalizes on all of these categories," he says. "The farm-to-table method is important. Some of it is about being good stewards

Winemaker Spotlight: How Wente Vineyards Brings Sustainability to the Forefront

One reason why it's important for retailers to understand the specifics of sustainability is that "sustainable" often means different things to different people. Some suppliers offer products that are greener than others.

At Wente Vineyards, sustainable farming practices are at the core of the California company's 3,000 acres of estate vineyards. The family-owned winery was certified for its sustainability related to vineyard, winery and company practices by the Certified California Sustainable Winegrowing designation.

"Our basic philosophy is to take great care of the soil and be sure to put back into it what you take out after each harvest," explains Karl Wente, Owner, Chief Operating Officer and Chief Winemaker at Wente. "Healthy soil leads to healthy grape vines, which leads to healthy clusters of fruit, which leads to great wine."

Everything that goes into Wente wine products is grown on the family's own land, giving them the highest possible level of control over their farming practices. All water used at the winery is recycled, and the company is responsible in terms of how much it irrigates.

Wente recycles as many other byproducts as it can, including glass and plastic. It is also conscious of limiting energy use as much as possible, by utilizing things like skylights and motion-sensor lighting throughout the winery.

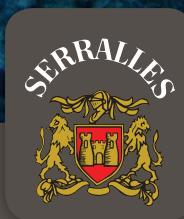
Wente says the vineyard's sustainability practices are one of company's values that he's most proud of. "The effort we put into being sustainable in all aspects of our business shows our commitment to wanting to do good in this area," he explains.

How can retailers effectively showcase Wente wines and other sustainable products to consumers? Wente says it's essential to have a section of your store clearly designated for green products. Also, make sure to offer point-of-sale materials and other educational displays to showcase these distinctive products to consumers. — MN

WE LIKE OUR PLANET TO BE IN GOOD SPIRITS.

"Although all spirits companies compete in the marketplace, sharing sustainable practices only makes the planet a better place. We are human beings first, and competitors second."

Roberto Serrallés, VP Business Development, Destilería Serrallés
"Awards & Wars: No Good Deed Goes Unpunished," Forbes.com



As one of the greenest spirits producers in the world, we set the bar for the competition. By treating and recycling our wastewater, we ensure that none of it pollutes our pristine Caribbean waters. And we are looking to do more, much more.

Our commitment to green production practices is not only good for business, it also makes a world of difference for our people, our island, our ocean and our planet. Because when it comes to the environment, we're all in this together.



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Our rums are best enjoyed in moderation.



of the Earth, but it's also about being good to your body. I think baby boomers might have had a bad experience with organic wine many years ago, but your average millennial is super psyched about all things green. There's no question that green has become mainstream."

Local products are another type of sustainable beverage category that can be a big selling point for wine and craft beer.

Eve Geroulis is a senior lecturer at Loyola University Chicago's Quinlan School of Business. She says that the key to sustainable alcohol consumption is using local alcohol products, and that operators need to understand the value of locale and articulate that information to consumers.

"It's challenging because with alcohol, you're dealing with an adult audience, and people who are making a luxury purchase," Geroulis says. "It's also an emotional purchase and a pleasurable purchase, and these things don't lend well to the notion of being green. People don't often think about how to tell consumers that the bottle of wine they're selecting has travelled 5,000 miles to get to their bar stool."

Integrating a selection of local products into the display mix at your store, bar or restaurant will add a new twist to sustainable beverages and also encourage consumers to support their surrounding communities.

MARKETING SUSTAINABLE

While retailers have many options for displaying product information and engaging with customers, it can be more difficult for bars and restaurants to showcase their green product offerings.

Jennifer Colliau is Bar Director at The Perennial, a San Francisco restaurant and bar focused on the benefits of progressive farming. Educating customers about the bar's unique offerings can be challenging.

"Finding that right balance of customer service in

The keys in Bay Ridge Wine and Spirits provide useful information for customers and help sell more wine.

this case is touchy, because not everyone wants a lecture when they're going out," Colliau explains. "The whole point of going out to eat is not to get educated about something, unless you want to. But if people watch us making the drinks, they'll see we do it differently, and that prompts a conversation."

The Perennial focuses on minimizing energy use and waste. All domestic wines on the bar menu come from producers who Perennial management feels do their best to source from organic vineyards. All European wines come from producers that are at minimum certified as organic, and many of them are farmed biodynamically.

The bar at The Perennial lacks an ice cube machine and utilizes several innovative cocktail mixing methods, including one known as empirical dilution.

The process involves using thermometers to craft stirred drinks, thereby regulating temperature and ensuring greater consistency. Colliau says she can measure the amount of dilution she's getting by stirring with a thermometer, which ultimately gives her more control over the process and results in a better drink, she believes.

Additionally, because the process eliminates the use of ice, the typical "shake, strain and dump" process of cocktail mixing is eliminated, resulting in zero waste. For shaken drinks, Colliau and her team use a blender to mix in exact amounts of ice, once again eliminating any wasted resources.

Although the bar currently doesn't explain its unique cocktail preparation process on its menus, staff are always available and eager to discuss these innovative methods.

Many of The Perennial's cocktails are also sustainable in that they eliminate the use of waste. Such as the Grapefruit Marmalade, which incorporates into the drink both the juice and the peel of the fruit. These details are included in the menu to alert customers of their sustainable option.

MELISSA NIKSIC is a freelance writer and marketing communications strategist from Chicago, IL. Her work has appeared in Chicago's Daily Herald newspaper, Time Out Chicago, Suburban Life newspapers, and various magazines. She is also the author of several children's books. Follow her @MelissaNiksic.



ECO STRATEGIES

Going green makes good business sense, appeals to consumers and helps save the planet

Everyone in the beverage business is going green – and no one has to ask why.

The writing has been on the spreadsheets for a while now. Forward-thinking brewers and distillers are delving into the role of environmental stewardship.

The challenges are complex. A brewery or stillhouse is just one link in the life chain of a pint of beer, or shot of liquor, impacting the planet's resources. That complex chain extends to the agricultural sourcing of the raw ingredients on one end, and bauxite mining and glass production for packaging on the other. Interdependencies among climate, watersheds, energy production and waste disposal entail multifaceted aspects in every environmental initiative. Sustainable solutions call for innovation and perseverance.

"Sustainable initiatives help us—and all companies who undertake them—to make a positive contribution to society and our planet," says Steve Harris, senior vice president, Technical, at Diageo North American Supply.

CENTS AND SENSE

Not only are sustainable initiatives the responsible thing to do, they also make good business sense. Improving efficiencies in production as well as sourcing and packaging fall to the bottom line. Green

technology helps the planet while providing good returns on investment.

"Sustainability is the right thing to do," says Katie Wallace, assistant director of sustainability for New Belgium Brewing. Wallace is also a co-chair of the Brewers Association's Sustainability Subcommittee. "The more we can reduce our water and energy consumption and CO₂ emissions, the more we help the ecosystem. It also mitigates our level of business risk."

New Belgium has been a pioneer as a friend of the Earth. Employees each get a free bicycle for low-impact transportation. Investments in more-efficient technologies have paid dividends over the years. "We believe we are more profitable not in spite of our social and environmental efforts, but because of them," notes Wallace.

Other companies have seen similar results.

"Nearly two and a half years after launching the Bacardi Limited 'Good Spirited: Building a Sustainable Future' initiative, we are on track to achieve 2017 goals for sourcing, operations and packaging," says Julio Torruella, director of Global Environment – Operations, for Bacardi.

In 2015, Bacardi already achieved an estimated savings of \$10M in energy, \$2M in glass weight, increased

water efficiency by 46% (and \$2M savings) and reduced greenhouse gas (GHG) intensity ratio by 47%.

"We are also on track to achieve our GHG emission reduction target of 50% this year, in 2016 – one year ahead of goal," adds Torruella.

Patron Spirits is a leader in green initiatives in Tequila, says Francisco Soltero, director of Strategic Planning and Public Affairs. "We are trying to do the right thing here, not just use the cheapest and easiest processes."

RISING TIDES

A confluence of events gives urgency to these initiatives. The growing world population, now pegged at 7.4 billion, is straining resources—water, energy and agriculture. Climate change is having a greater, unpredictable impact, as all signs point to the disruptive effects of greenhouse gas emissions. Ratification of the Paris Climate Agreement will compel reductions in GHGs, and smart corporations are getting ahead of that curve.

Consumers are increasingly concerned about the situation. "More customers these days consider sustainability to be a business norm," says Wallace. Research by New Belgium shows that as much as 70-80% of customers expect sustainability efforts from the companies they buy from.

BIG AND SMALL

Beverage producers big and small are improving operational efficiencies as well as examining impacts from agricultural partners and packaging changes. The drinks business is doing a good job compared with other industries.

"We have a simple supply chain and impact," points out Wallace. Just water, grain and other fermentables, hops and flavoring, and packaging—bottles and cans, which are recyclable.

One company taking direct action in the supply chain is Destillería Serrallés, producer of Don Q rum.

"We are bringing sugarcane back to Puerto Rico for the first time in over two decades," says Roberto Serralles, vice president of business development. The company is developing a 12,000-acre sugar plantation near the distillery. "Transporting molasses to Puerto

Rico has a huge carbon footprint. Having locally grown sugarcane will reduce that impact," says Serralles.

Plans are to irrigate the cane fields with reclaimed waste water, and fertilize with organic waste matter extracted from rum processing.

While smaller craft producers may have more flexibility to make changes, they lack the resources that big companies possess. That's another leg up for worldwide drinks giants.

"Beverage companies with large global footprints are already experiencing impacting events such as brownouts and water shortages. They are forced to address these vulnerabilities, and translate those experiences into risk management practices," says Tod D. Christenson, director of the Beverage Industry Environmental Roundtable (BIER).

BIER is a technical coalition of beverage companies working to establish benchmarks and develop best practices for sustainable solutions – all of which is freely shared.

Sustainability efforts fall into four main areas of concern: water, GHG emissions, waste, and packaging.

"WE ARE TRYING TO DO THE RIGHT THING HERE, NOT JUST USE THE CHEAPEST AND EASIEST PROCESSES."

—Francisco Soltero, director of Strategic Planning and Public Affairs, Patron Spirits

On average, it takes 7-10 gal. of water to produce 1 gal. of beer—although some brewers have lowered that ratio considerably. Heineken USA, for example, has reduced water consumption at its breweries by 26% since 2008, according to company reports.

"Brewing beer requires a lot of water, not just for the liquid-end product itself, but also the process," affirms Kate Avery, director of sales & marketing for Brewery Vivant. "We try to recapture as much water as we can, but inevitably it takes a lot."

The goal is a 3:1 ratio, she adds. The Michigan-based brewery is the first Silver LEED-certified micro brewery.

Spirits ratios are more variable, depending upon the operational scale, distillation process and ABV. "One bottle of a premium spirit requires 10 liters of water to produce, making sustainable water use a very important

WE PROTECT WHAT MAKES US PERFECT

Responsible drinking starts with choosing a responsible drink. At Patrón, sustainability is part of our DNA. After all, everything we do depends on a healthy planet.

We are known for creating the world's finest tequila, but we don't stop there. We developed a revolutionary reverse osmosis process that allows us to reclaim water used in tequila production and use it to clean our facilities and irrigate our flower and vegetable gardens. Leftover agave fiber is used to create fertilizer compost, which is provided at no cost to local farmers and the surrounding community.

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consideration,” says Torruella. For Bacardi rums, that was reduced from 12 liters, a considerable savings. Bacardi’s 2017 goal is to cut water use by 55%.

Some water fixes are easy, like maintenance on pipes, hoses and other equipment to stop leaks. Brooklyn Brewery installed low-flow sinks as one facet of its water-reduction efforts. Allagash Brewing Co. in Portland, Me., keeps close tabs on water by installing flow restrictors on every faucet in their facility as well as using water-free urinals in restrooms. The keg line has a closed loop CIP system, reducing water needed to clean kegs.

Other aspects of beverage lifecycles are more water-intensive—growing raw ingredients and manufacturing packaging. Many beverage companies work with agricultural supplier partners to improve irrigation effectiveness and crop yields. MillerCoors’ Showcase Barley Farm in Idaho has cumulatively saved more than 400 million gallons of water in three years of operation.

“A critical goal for the future is also a current one: to reduce water use,” says Harris at Diageo. “We will continue to focus on improving water efficiency across our operations in order to enhance our performance as well as benefit local communities.” The company increased water efficiency by 23% since 2007.

CONSERVING ENERGY

As products that require heating, cooling and chilling, beer and spirits are energy-intensive to make. But new energy-efficient equipment and best practices have dropped utility bills. Capturing and reusing heat and other energy is one strategy. Beverage companies are also moving toward renewable energy sources such as

wind, solar and geothermal.

Diageo already uses 100% renewable electricity at the majority of its U.S. sites. Using biogas technology at its Glendullan distillery in Speyside, the plant last year realized a 25% reduction in fossil fuel energy.

This year, Brewery Vivant installed 192 solar panels to help supply energy. New Belgium retrofitted its warehouse with LED lighting, which cut electricity bills. The brewhouse also makes maximum use of available natural light.

Heineken revamped its Göss brewery in Austria, the first large-scale carbon neutral brewery in the world, according to the company. The brewery is now powered entirely by renewable and reusable energy sources, including solar, hydropower, biogas and waste heat from a neighboring sawmill. Other Heineken brands—including Tiger beer in Singapore, Birra Moretti Baffo D’Oro in Italy and Wieckse in the Netherlands—are using solar energy installations to power brewing processes.

Patron Spirits formerly used oil to heat boilers at its distillery in Jalisco. Then the company converted to more environmentally friendly natural gas. It was the first Tequila distillery to do so.

For its part, Bacardi installed biomass boilers—fueled by wood chips, spent botanicals, and/or agave plants—at its Scotch whisky distillery in Aberfeldy, the Bombay Sapphire distillery at Laverstoke Mill in England, and the Cazadores tequila facility in Arandas, Mexico—which have cut GHG emissions. Two wind turbines were installed at the world’s largest premium rum facility in Cataño, Puerto Rico.

Destillería Serrallés is burning leftover sugarcane fiber, called bagasse, in a biomass boiler to reduce energy requirements. The boiler also burns biogas obtained from waste-water treatment.

GREENHOUSE GAS EMISSIONS

Fermentation for beverage alcohol generates CO₂ as a waste product, which is a primary greenhouse gas. Compressed CO₂ is also widely used to purge hose lines, tanks and other vessels. It’s also used to carbonate beer before packaging. Producers are implementing a number of methods to trim CO₂ emissions and reduce their carbon footprints.

Heineken’s revamp of the Goss brewery is a prime example. Daily it produces 1.4 million bottles of carbon-neutral produced beer, and is helping to achieve Heineken’s commitment to a 40% reduction in CO₂ emissions from production by 2020.



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Prairie Organic Spirits is proud to offer 100% USDA certified organic and American-made vodkas and gin. Our products are made from single-sourced corn grown on family farms.

Good in taste and good in heart, Prairie Organic Spirits are crafted with respect from seed to glass.



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Nielsen 52 Week Sales Dollars Total US week ending 12-5-15

"We have already met our 2020 goals for GHG here in North America, but we remain focused on further improvements," comments Harris. The North American region leads Diageo's business in reducing greenhouse gas emissions, with two major distilleries fueled exclusively on renewable energy/biogas.

Since 2006, Bacardi rum production has reduced greenhouse gas emissions by 48%. The company-wide goal is to cut GHG emissions by 50%.

At Destillería Serrallés, carbon dioxide is captured during fermentation and sold to a local soft-drink producer to carbonate soda pop.

Offsetting carbon footprints is another strategy. It is estimated that one tree absorbs 2,000 pounds of carbon dioxide in its lifetime. McCormick Distilling Co., maker of 360 Vodka, planted indigenous trees on 40 acres of the land around the distillery. Brooklyn Brewery partnered with the Arbor Day Foundation to plant 375 acres of trees, which will offset 1,500 tons of CO₂. Patron Spirits traded some of the compost it makes from processing waste for 10,000 trees, which will be planted around Hacienda Patron in Atotonilco.

REDUCING WASTE

"Reducing waste to landfill can result in being compensated for recycling, or eliminating waste streams altogether, both of which contribute favorably to the bottom line," remarks Harris. Diageo's global goals target achieving zero waste to landfills by 2020.

At New Belgium, "we divert 99.9% of our waste materials from landfills," says Wallace. At McCormick, spent grains are dried for use by local farmers as animal feed. "There is almost no waste produced in the creation of 360 Vodka," says Hale.

Brooklyn Brewery also recycles its spent grain as animal feed. And the brewery repurposes retired barrels as furniture in its tasting room.

"One of the largest issues for all spirits producers is the large amounts of waste water produced," says Serralles, who holds a Ph.D. in environmental studies. His first job at the Destillería Serrallés was to implement a waste water system. "The goal, first and foremost, was to make sure not a single drop of our waste water ends up in the ocean."

Here's how: First, anaerobic digestion bacteria reduces up to 60% of the organic matter. The secondary stage is an aerobic digestion system where waste water is bombarded with oxygen for bacteria to work, which removes 99% from water. The result is irrigation-grade water. Extracted organic waste is mixed with wood chips from old pallets and barrels to turn it into organic compost. Both will be used for the sugarcane plantation when it comes on-line.

"Production of Tequila generates two waste byproducts: one is the leftover agave fiber, the other is liquid with organic matter," says Soltero at Patron. The waste water is treated with reverse osmosis filtration, reclaiming water for cooling and cleaning use. What's left is mixed with the leftover agave fiber to create compost, which is returned to the agave fields as fertilizer.

"It completes the cycle," notes Soltero.

Little changes can add up. In honor of World Water Day, Bacardi ceased the use of plastic straws and stirrers in cocktails served at visitors' centers and in-house corporate events. Bacardi estimates its efforts will keep 650,000 straws and stirrers out of landfills each year. "Already, one-third of our manufacturing sites have achieved 'Zero Waste to Landfill' status," says

Torruebla, and globally no more than 0.5% of the total waste is sent to landfills.

INNOVATIVE PACKAGING

Like other components of beverage alcohol, packaging has an environmental footprint. And the amount of eco-impact of the various choices is not always clear.

Cans are lighter than glass bottles, which means that shipping costs and carbon footprints are less. However, aluminum cans are made from bauxite, which itself has environmental challenges. Glass bottles, on the other hand, are made from readily available silica sand. Water and energy are expended in the making of both containers. And both are usually made partly from recycled materials. However, the heavier bottles are more expensive to ship to recycling centers. Plastic containers are also an option, but not yet wholly accepted in the U.S. market.

Spirits producers have been shaving grams off their bottles to make lighter, less-expensive and better containers. Bacardi, for example, plans to reduce the weight of its packaging 10% by 2017, 15% by 2022.

McCormick's 360 Vodka touts its unique swing-top closure; the bottle is designed for reuse by consumers or for rebottling. The bottle is made of 50% recycled glass and labels are printed on recycled paper using eco-friendly inks. For each swing-top bottle returned, the company donates \$1 to local charities and eco-friendly organizations.

Diageo's global 2020 goals include reducing total packaging by 15%, while increasing recycled content to 45% and making 100% of packaging recyclable. "We are also working to sustainably source all of our paper and board packaging to ensure zero net deforestation," says Harris. In North America, the company is working to eliminate PVC from packaging. The goal is to be PVC-free by December 2017.

One packaging innovation is the edible six-pack ring set debuted recently by Saltwater Brewery. Made from reprocessed spent grains, the can holders are

100% biodegradable. And, according to brewer Peter Agardy, they won't pose a hazard to seabirds and marine mammals.

GETTING THE WORD OUT

Just as important as these sustainable initiatives, it is critical to get the word out to consumers.

"We share our Good Spirited stories through our corporate website and brand and corporate social media channels, as well as via our brand events," says Torruella at Bacardi. "From the responses we receive on our various initiatives, we know consumers care. Protecting our natural environment is everyone's responsibility."

"Consumer expectations about sustainability and corporate responsibility are increasing," says Christenson at BIER. "It is more important than ever to tell your story and be more credible with consumers."

THOMAS HENRY STRENK is a Brooklyn-based freelance writer with over 20 years experience covering the beverage and restaurant industries.

{ Advertorial }

At Patrón, environmental sustainability is a daily focus, particularly in the brand's production process.

At the Hacienda Patrón, nestled in the Highlands of the Jalisco region of Mexico where Patrón tequila is distilled and bottled, the company adheres to strict practices to help limit the environmental impact of production. All tequila production processes create a leftover distillate, or "stillage," by-product. Rather than discard this, one of the initiatives that Patrón has developed is a reverse osmosis system that recovers up to 70 percent usable water from the stillage. This recovered water is then used in the facilities' cooling towers, and for cleaning.

The remaining stillage (up to 30 percent) is used to treat Patrón's compost area. Tequila of course is distilled from the native Weber Blue Agave plant, but not every part of this desert succulent is used in the distillation process. Instead of disposing of this leftover agave as waste, Patrón takes this agave tissue, or "bagasse," and mixes it



◀ Patrón's reverse osmosis.

with the remaining concentrated stillage to create compost. This compost is then used to grow crops in the Hacienda's organic vegetable garden, helping provide food for Hacienda staff and visitors. The compost is also used to fertilize the agave fields and is given free to the town to use in area recreational fields and other gardens and land areas.

VIEWS FROM THE FRONTLINES

Retailers differ on the importance of sustainability

Do customers care about sustainability when buying wine, beer or spirits?

We invited retailers to write their opinions on the question. And much like with our survey, the results were split down the middle. Here's what was reported from the frontlines:

MELISSA SURDYK

Owner, Surdyk's Liquor & Cheese Shop

Minneapolis, MN

If your average third grader can tell you the fundamentals of 'being green', you can guarantee the subject of sustainability is being discussed and implemented throughout the adult beverage industry.

Start with wine, where the use of the word 'sustainability' on the label has become as present as the flavor description. But what does that mean? By law, nothing. However, it should imply that the winery has taken steps, either in the vineyard or during production, with economic and/or social responsibility in mind.

We are seeing organic designations in the spirit sector, with vodka and tequila leading the way. In the beer industry, 'local' seems to be the emphasis: sourcing malt and hops grown near the breweries. Even large distilleries are sourcing grain from local farms. And when the production process results in leftover waste, such as the mash from both whiskey and beer, it can be sold as livestock feed.

Clearly, our customers are environmentally aware and it appears the industry is taking note."

DUSTIN MITZEL

GM, Happy Harry's Bottle Shop

Fargo, North Dakota

"While we have small organic sections in all of our stores, it has never been a focus of ours and, quite honestly, not a big category for customers. While we consider ourselves a progressive retailer, we just haven't seen a large demand for those types of wines.

We do believe that as the organic movement gains momentum in the Midwest, we will adjust to accommodate our customers' needs and wants. I would anticipate us creating even larger sections in our

stores dedicated to sulfite free/organic/etcetera – and educating our staff even further on the differences."

KATIE HARPER

Head Wine Buyer, Bay Ridge Wine & Spirits

Annapolis, MD

"Sustainability and organic farming practices have become important when educating consumers about wines they are purchasing.

As a buyer, it has always been important to me to support wines that are made from estates using sustainable practices. And I see the importance of this growing each year with our customers.

At our shop, we have an increase in the amount of customers searching for organic wines. We have POS on our shelves explaining the difference between sustainable, organic and biodynamic. We use these to start conversations with customers who might find wine overwhelming or intimidating.

Responsible farming is where it all begins. It has an influence on the way the wine will taste when it gets to the table of your customer.

We recently had an environmental blogger come to our shop because he heard we had quite the biodynamic wine selection. He drives 30 minutes to shop with us because our selection is large and diverse. I see more of these customers each year.

The growth of this category is exciting. Wines that are farmed responsibly and tell the story of their vineyard are my favorite to sell!"

JOSH HAMMOND

President, Buster's Liquors & Wines

Memphis, TN

"While it's a worthy endeavor witnessing more wineries move toward sustainability, the fact is that very few customers actually seek out green/sustainable/organic products.

Not many wines in the market are labeled as such, and that makes it difficult for this category to grow. Consumers, I'm sure, appreciate sustainable methods, but in the end, they are truly searching out taste profiles above all."

READERS RESPOND

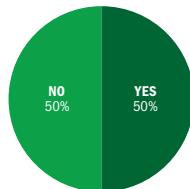
How important is going green?

Throughout 2016, we asked readers of our email newsletters (Cheers Weekly and Beverage Dynamics Roundup) what they thought about sustainable products and packaging, and the movement in general. Our survey results show that there's no national consensus on the importance of showcasing sustainable wines, spirits and beers, nor how consumers respond to those products.

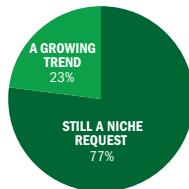
Comments from retailers and operators ranged from "Not really impacting our market," to "Sustainability is a bigger trend in wine than in spirits." One respondent said they would like to see bottle deposits on all glass and plastic containers, and wished all beverage alcohol products could be made more sustainably to reduce environmental impact.

Here are some of the highlights from that survey.

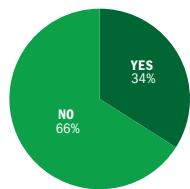
HAVE YOU ADDED NEW SUSTAINABLE PRODUCTS TO YOUR INVENTORY IN THE PAST YEAR?



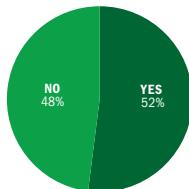
HOW WOULD YOU DESCRIBE THE DEMAND FOR SUSTAINABLE PRODUCTS?



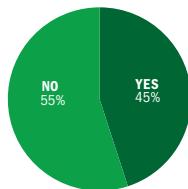
IN YOUR OPINION, ARE SUSTAINABLE PRODUCTS INHERENTLY WORTH A PREMIUM PRICE?



HAVE YOU RESEARCHED THE CERTIFICATIONS AND REGULATIONS THAT DETERMINE WHETHER A PRODUCT IS CONSIDERED SUSTAINABLE?



DO YOU IDENTIFY SUSTAINABLE PRODUCTS ON A MENU (ON-PREMISE) OR WITH SPECIFIC SIGNAGE (OFF-PREMISE)?



WHAT IS YOUR BEST-SELLING SUSTAINABLE WINE?
[TOP 3 LISTED]

NATURA
FRANZIA
KING ESTATE

WHAT IS YOUR BEST-SELLING SUSTAINABLE SPIRIT?
[TOP 3 LISTED]

PRAIRIE ORGANIC VODKA
TITO'S VODKA
360 VODKA

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