

# Promoting Sustainability and Recyclability in Food and Beverage Packaging\*

U.S. food and beverage packaging accounts for 30 percent of municipal solid waste, and never have consumers been more concerned about the environmental consequences of their purchases, including those who are actively seeking and even willing to pay a little extra to support sustainable products. With the market for sustainable products growing, it is incumbent on brands and retailers to offer their customers more choices. In particular, businesses should strive to reduce their reliance on cartons and plastics, which are less recyclable, and expand their use of metal packaging materials, which can be infinitely recycled to make the same products, over and over again.

#### Introduction

An unprecedented number of consumers are shopping with environmental sustainability in mind. In response, brands across many sectors have started focusing more on sustainable options. One notable example is McDonald's plans, announced in 2018, to stock their restaurants around the globe with packaging—including straws—that are from renewable, recycled, or certified sustainable sources.<sup>2</sup>

While the data show that consumers want to purchase items that are sustainable, they are often limited by choices available to them on store shelves, whether in person or online. Today, much of the packaging currently available includes plastics, cartons, and flexible pouches, all of which present challenges with regards to their sustainability. Brands and retailers should consider packaging and selling items packaged in more sustainable materials to

<sup>&</sup>lt;sup>1</sup> "Containers and Packaging: Product-Specific Data," U.S. Environmental Protection Agency, January 19, 2017, <a href="https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/containers-and-packaging-product-specific-data#PlasticC&P">https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/containers-and-packaging-product-specific-data#PlasticC&P</a>.

<sup>&</sup>lt;sup>2</sup> Crystal Lindell, "McDonald's Pledges All Sustainable Packaging by 2025," Food Engineering, January 29, 2018, <a href="https://www.foodengineeringmag.com/articles/97261-mcdonalds-pledges-all-sustainable-packaging-by-2025">https://www.foodengineeringmag.com/articles/97261-mcdonalds-pledges-all-sustainable-packaging-by-2025</a>.

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provide customers with better and more sustainable choices. Additionally, these companies could work to educate the public -- and dispel common misconceptions -- about the sustainability of these materials.

## **Demand for Sustainable Products is Growing**

In the last few decades, issues such as climate change and sustainability have become more mainstream and gained a larger audience. Now, the majority of American consumers consider the environmental impact when making purchases. A 2019 survey revealed that nearly 70 percent of U.S. adults consider sustainability when making a purchase, and 47 percent are willing to pay more for sustainable products.<sup>3</sup>

This trend will likely increase as younger and more environmentally-conscious consumers age. <sup>4</sup> The shift in attitudes has already been swift. In 2015, a Nielsen report found that 73 percent of millennials were willing to pay more for sustainable goods, up from just 50 percent a year earlier. <sup>5</sup> And, research by First Insight in 2019 found that 62 percent of generation Z consumers prefer to buy from sustainable brands, while 54 percent are willing to pay an extra 10 percent on these products. <sup>6</sup> By comparison, only 34 percent of generation X consumers and 23 percent of baby boomers said the same. With every generation, the commitment to sustainability strengthens.

# A Commitment to Sustainability is Good Business

With consumer demand for sustainable products steadily growing, the tensions manufacturers and retailers sometimes face between environmental responsibility and economic viability are waning. In fact, recent trends show shifting to more sustainable products and packaging can be good for business. According to Nielsen's 2015 Global Corporate Sustainability Report, which analyzed 1,319 brands across 13 countries, sales of consumer goods from brands with a demonstrated commitment to sustainability grew more than 4

<sup>&</sup>lt;sup>3</sup> "CGS Survey Reveals Sustainability is Driving Demand and Customer Loyalty," CGS press release, January 10, 2019, <a href="https://www.globenewswire.com/news-release/2019/01/10/1686144/0/en/CGS-Survey-Reveals-Sustainability-Is-Driving-Demand-and-Customer-Loyalty.html">https://www.globenewswire.com/news-release/2019/01/10/1686144/0/en/CGS-Survey-Reveals-Sustainability-Is-Driving-Demand-and-Customer-Loyalty.html</a>.

<sup>&</sup>lt;sup>4</sup> "The Millennials: A Generation Invested in Health and the Environment," Glass Packaging Institute, November 2014, http://www.gpi.org/sites/default/files/GPI-TheMillennials-11%206%2014-FINAL.pdf.

<sup>&</sup>lt;sup>5</sup> "Consumer-Goods' Brands That Demonstrate Commitment to Sustainability Outperform Those That Don't," Nielsen, October 12, 2015, <a href="https://www.nielsen.com/us/en/press-releases/2015/consumer-goods-brands-that-demonstrate-commitment-to-sustainability-outperform/">https://www.nielsen.com/us/en/press-releases/2015/consumer-goods-brands-that-demonstrate-commitment-to-sustainability-outperform/</a>.

<sup>&</sup>lt;sup>6</sup> "The State of Consumer Spending: Gen Z Shoppers Demand Sustainable Retail," First Insight, December 2019, <a href="https://www.firstinsight.com/white-papers-posts/gen-z-shoppers-demand-sustainability">https://www.firstinsight.com/white-papers-posts/gen-z-shoppers-demand-sustainability</a>.

percent globally, while those without grew less than 1 percent. As such, producers and retailers need to be responsive to consumer demand to continue to maintain and win market share within these consumer segments.

## **Packaging Waste is a Growing Environmental Problem**

According to the EPA, containers and packaging make up a major portion (nearly 30 percent) of municipal solid waste in the U.S., totaling 80 million tons in 2017 -- almost three times the quantity generated in 1960.<sup>8</sup> Only half of this waste is recycled. Putting aside industrial and commercial sources of waste, the numbers are even more stark. Packaging represents about 65 percent of household trash.<sup>9</sup> Out of every \$10 dollars consumers spend, an average of one goes to packaging that is thrown away.<sup>10</sup>

As brands and retailers seek to improve the sustainability of their products, examining the recyclability of packaging material is an important step. The next sections discuss the five materials that make up the vast majority of food and beverage packaging: plastics, glass, cartons, flexible pouches, and metal.

#### 1. Plastics

Plastic packaging materials, including polystyrene and polyethylene terephthalate (PET), are the most common and most wide-ranging materials used for food packaging, and the largest market for plastics is packaging. <sup>11</sup> Due to their low cost, light weight, moldability, printability, and heat resistance, plastics are commonly found in bottles, trays, bags, wraps, cups, pots, pouches, and bowls. <sup>12</sup>

However, plastic packaging causes substantial environmental damage. A mere 13 percent of plastic packaging, including containers, was recycled in the U.S. in 2017, while more

<sup>&</sup>lt;sup>7</sup> "Consumer-Goods' Brands That Demonstrate Commitment to Sustainability Outperform Those That Don't," Nielsen, October 12, 2015, <a href="https://www.nielsen.com/us/en/press-releases/2015/consumer-goods-brands-that-demonstrate-commitment-to-sustainability-outperform/">https://www.nielsen.com/us/en/press-releases/2015/consumer-goods-brands-that-demonstrate-commitment-to-sustainability-outperform/</a>.

<sup>&</sup>lt;sup>8</sup> "Containers and Packaging: Product-Specific Data," U.S. Environmental Protection Agency, January 19, 2017, <a href="https://www.usi.edu/recycle/solid-waste-landfill-facts/epa.gov/facts-and-figures-about-materials-waste-and-recycling/containers-and-packaging-product-specific-data#PlasticC&P.">https://www.usi.edu/recycle/solid-waste-landfill-facts/epa.gov/facts-and-figures-about-materials-waste-and-recycling/containers-and-packaging-product-specific-data#PlasticC&P.</a>

<sup>&</sup>lt;sup>9</sup> "Solid Waste & Landfill Facts," University of Southern Indiana, <a href="https://www.usi.edu/recycle/solid-waste-landfill-facts/">https://www.usi.edu/recycle/solid-waste-landfill-facts/</a>.

<sup>&</sup>lt;sup>10</sup> Ibid.

<sup>&</sup>lt;sup>11</sup> Roland Geyer, Jenna R. Jambeck and Kara Lavender Law, "Production, Use, and Fate of All Plastics Ever Made," *Science Advances*, Vol. 3:7, July 19, 2017, <a href="https://advances.sciencemag.org/content/3/7/e1700782.full">https://advances.sciencemag.org/content/3/7/e1700782.full</a>.

<sup>&</sup>lt;sup>12</sup> Kenneth March and Betty Bugusu, "Food Packaging—Roles, Materials, and Environmental Issues," *Journal of Food Science*, Vol. 72:3, March 31, 2007, <a href="https://doi.org/10.1111/j.1750-3841.2007.00301.x">https://doi.org/10.1111/j.1750-3841.2007.00301.x</a>.

than 10 million tons of plastic packaging waste went to landfills.<sup>13</sup> According to the first global analysis of all mass-produced plastic ever manufactured, 91 percent of plastics are never recycled, and a small percentage are incinerated.<sup>14</sup> The vast majority end of plastics up in landfills or littered throughout the environment, contributing to ecological damage.

An analysis by the Ellen MacArthur Foundation suggests that 95 percent of plastic packaging material value, estimated at \$80 to \$120 billion annually, is lost after a short first use. Moreover, by degrading natural resources and clogging urban infrastructure, plastic packaging waste imposes at least \$40 billion in ancillary costs on the economy. <sup>16</sup>

In addition, of the limited amount of plastic packaging materials that are recycled, most do not come back as the same product that was originally recycled. Rather, recycled plastics are commonly made into lower quality forms of plastics, a process known as *downcycling*.<sup>17</sup> As a result, recycling plastic does not cause a one-for-one displacement of primary plastic production. Certain plastic food and beverage packaging products are downcycled to make various materials, such as car parts and toys. Eventually, however, these all end up in landfills, as the same piece of plastic can only be recycled about two-to-three times before its quality decreases to the point where it can no longer be used, assuming they are picked up for recycling in the first place.<sup>18</sup> Unfortunately, recycling plastic only delays eventual disposal in a landfill or incineration.<sup>19</sup>

#### 2. <u>Glass</u>

Glass is a packaging material commonly used for bottles, jars, and many containers for food and drinks, including carbonated beverages, sauces, syrups, and processed vegetables and fruits, to name a few. While it is possible to recycle most glass over and over again, only 27

<sup>&</sup>lt;sup>13</sup> "Plastic Containers and Packaging," U.S. Environmental Protection Agency, January 19, 2017, <a href="https://www.usi.edu/recycle/solid-waste-landfill-facts/epa.gov/facts-and-figures-about-materials-waste-and-recycling/containers-and-packaging-product-specific-data#PlasticC&P.">https://www.usi.edu/recycle/solid-waste-landfill-facts/epa.gov/facts-and-figures-about-materials-waste-and-recycling/containers-and-packaging-product-specific-data#PlasticC&P.</a>

<sup>&</sup>lt;sup>14</sup> Roland Geyer, Jenna R. Jambeck and Kara Lavender Law, "Production, Use, and Fate of All Plastics Ever Made," *Science Advances*, Vol. 3:7, July 19, 2017, <a href="https://advances.sciencemag.org/content/3/7/e1700782.full">https://advances.sciencemag.org/content/3/7/e1700782.full</a>.

<sup>&</sup>lt;sup>15</sup> "The New Plastics Economy: Rethinking the Future of Plastics," Ellen MacArthur Foundation, March 15, 2016, <a href="https://www.ellenmacarthurfoundation.org/assets/downloads/EllenMacArthurFoundation">https://www.ellenmacarthurfoundation.org/assets/downloads/EllenMacArthurFoundation</a> The New Plastics Economy 15-3-16.pdf.

<sup>&</sup>lt;sup>16</sup> Ibid.

<sup>&</sup>lt;sup>17</sup> Hannah Ritchie, "FAQs on Plastics," Our World in Data, September 2, 2018, <a href="https://ourworldindata.org/faq-on-plastics">https://ourworldindata.org/faq-on-plastics</a>.

<sup>&</sup>lt;sup>18</sup> "7 Things You Didn't Know About Plastic (and Recycling)," National Geographic, April 4, 2018, <a href="https://blog.nationalgeographic.org/2018/04/04/7-things-you-didnt-know-about-plastic-and-recycling/">https://blog.nationalgeographic.org/2018/04/04/7-things-you-didnt-know-about-plastic-and-recycling/</a>.

<sup>&</sup>lt;sup>19</sup> Hannah Ritchie, "FAQs on Plastics," Our World in Data, September 2, 2018, <a href="https://ourworldindata.org/faq-on-plastics">https://ourworldindata.org/faq-on-plastics</a>.

percent of glass containers were recycled in 2017, according to EPA data.<sup>20</sup> The vast majority of glass packaging -- nearly 7 million tons -- produced in the U.S. each year went to landfills. When consumers do recycle their glass products, the materials sometimes break, creating hazards for workers at processing facilities and damaging sortation equipment.<sup>21</sup> And, since the production of glass containers follows the same energy-intensive process regardless of whether virgin or recycled materials are used, recycling glass containers reduces energy use by only about 13 percent.<sup>22</sup> Finally, because glass is heavy and fragile (requiring special packing materials to cushion shocks), transporting it is expensive, and produces higher emissions, compared to other packaging.<sup>23</sup>

#### 3. Cartons

Cartons found in grocery stores include both aseptic cartons, which are popularly used for some shelf-stable liquid food products like broths and soups, and gable-top cartons, which are refrigerated and used for many milks and egg substitute products. Though widely found on store shelves, the composition of most cartons -- made mostly of paper, typically mixed with plastic and aluminum -- makes recycling difficult. Many municipalities do not accept cartons, including those made by Tetra Pak (one of the largest food packaging companies in the world), in their recycling programs. Amany of these mixed material cartons do not get recycled, and instead, head to landfills. When cartons do make it to a recycling facility, like many plastics, they are downcycled, and the components are used only as additives in different products, from office paper to building materials. Today, in the U.S., only 16 percent of cartons are recycled. In the U.S. only 16 percent of cartons are recycled.

 <sup>&</sup>quot;Glass: Material-Specific Data," U.S. Environmental Protection Agency, January 19, 2017,
 <a href="https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/glass-material-specific-data">https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/glass-material-specific-data</a>.
 "What Happens When the Wrong Things Go Into Recycling," Vogel Disposal Services, Inc., July 17, 2019,

https://www.vogeldisposal.com/vogel-disposal-news/what-happens-when-the-wrong-things-go-into-recycling-4022.

<sup>&</sup>lt;sup>22</sup> L. L. Gains and M. M. Mintz, "Energy Implications of Glass-Container Recycling, Argonne National Laboratory and the National Renewable Energy Laboratory, ANL/ESD-18 and NREL/TP-430-5703, March 1994, <a href="https://www.nrel.gov/docs/legosti/old/5703.pdf">https://www.nrel.gov/docs/legosti/old/5703.pdf</a>.

<sup>&</sup>lt;sup>23</sup> Kenneth March and Betty Bugusu, "Food Packaging—Roles, Materials, and Environmental Issues," *Journal of Food Science*, Vol. 72:3, March 31, 2007, <a href="https://doi.org/10.1111/j.1750-3841.2007.00301.x">https://doi.org/10.1111/j.1750-3841.2007.00301.x</a>.

<sup>&</sup>lt;sup>24</sup> Adele Peters, "Boxed Water Isn't the Environmental Solution They Want You To Think It Is," Fast Company, November 13, 2019, <a href="https://www.fastcompany.com/90421638/boxed-water-isnt-the-environmental-solution-they-want-you-to-think-it-is">https://www.fastcompany.com/90421638/boxed-water-isnt-the-environmental-solution-they-want-you-to-think-it-is.</a>

<sup>&</sup>lt;sup>25</sup> Leah Blunt, "Recycling Mystery: Milk and Juice Cartons," Earth911, November 14, 2018, https://earth911.com/home-garden/recycling-mystery-milk-and-juice-cartons/.

<sup>&</sup>lt;sup>26</sup> "Carton Council: Breaking Through Misconceptions," *Waste Advantage Magazine*, May 31, 2019, <a href="https://wasteadvantagemag.com/carton-council-breaking-through-misconceptions/">https://wasteadvantagemag.com/carton-council-breaking-through-misconceptions/</a>.

#### 4. Flexible Pouches

Flexible pouches are another commonly used packaging product. These pouches are sometimes resealable and are often used to package food products including baby food, snack foods, drinks, processed fruits and vegetables, and ready-to-eat meals. Likely due to the convenience offered, flexible packaging is the fastest growing segment of packaging in the U.S., becoming more popular despite their lack of recyclability.<sup>27</sup> Many of these pouches are made from layered materials, including plastic, which presents some obstacles for easy recycling. Because of FDA concerns with "purity and cleanliness," they cannot be recycled back into flexible food packaging.<sup>28</sup> In fact, much like cartons, most curbside recycling programs do not accept flexible pouches.<sup>29</sup>

### 5. Metals

Metal is one of the most versatile packaging materials. Metal cans, including those made from steel, tin, and aluminum, are widely used for beverages and canned food items. The use of metal packaging offers several environmental benefits. In stark contrast to plastic, metallurgical properties of steel and aluminum allow them to be recycled over and over with no loss of strength or quality. For example, unlike plastic, a steel can become a steel can over and over again. Steel is the most recycled material in the world, with a global recycling rate of 86 percent in 2014. This includes a 95 percent recycling rate for automobiles, a 88 percent recycling rate for appliances, and a 70 percent recycling rate for steel packaging. The recycling rate for steel food cans is particularly high, at 71 percent, according to EPA data from 2017, higher than the recycling rate for any other food packaging material. And aluminum cans, like those used for soft drinks, are recycled at nearly double the rate of glass or plastic bottles.

Overall, aluminum and steel cans are made with more recycled content than other food packages. Aluminum beverage cans in the U.S. are made up of 70 percent recycled content, on

<sup>&</sup>lt;sup>27</sup> Alison Keane, "2019 Packaging Outlook: Flexible Plastic Packaging," Packaging Strategies, https://www.packagingstrategies.com/articles/91042-packaging-outlook-flexible-plastic-packaging.

<sup>&</sup>lt;sup>28</sup> Lisa Pierce, "How to Increase Recycling of Flexible Packaging," *Packaging Digest*, interview with Jeff Wooster, March 15,m 2017, <a href="https://www.packagingdigest.com/flexible-packaging/how-to-increase-recycling-of-flexible-packaging-2017-03-15">https://www.packagingdigest.com/flexible-packaging/how-to-increase-recycling-of-flexible-packaging-2017-03-15</a>.

<sup>&</sup>lt;sup>29</sup> "Are Drink Pouches Recyclable or Trash?" Waste Away, March 14, 2018, <a href="http://wasteawaygroup.blogspot.com/2018/03/are-drink-pouches-recyclable-or-trash.html">http://wasteawaygroup.blogspot.com/2018/03/are-drink-pouches-recyclable-or-trash.html</a>.

<sup>&</sup>lt;sup>30</sup> "Steel is the World's Most Recycled Material," Steel Recycling Institute, <a href="https://www.steelsustainability.org/recycling">https://www.steelsustainability.org/recycling</a>.

<sup>&</sup>lt;sup>31</sup> "Ferrous Metals: Material-Specific Data," U.S. Environmental Protection Agency," January 19, 2017, <a href="https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/ferrous-metals-material-specific-data">https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/ferrous-metals-material-specific-data</a>.

<sup>&</sup>lt;sup>32</sup> "Success Stories in Recycling," U.S. Environmental Protection Agency, November 2019, https://www.epa.gov/sites/production/files/2019-11/documents/americarecyclessuccess 2019 v3.pdf.

average, compared to 23 percent for glass and just three percent for plastic.<sup>33</sup> And, the recycling process for metal cans offers some energy efficiencies that contribute to sustainability. Recycling aluminum cans saves 95 percent of the energy needed to make the same amount of aluminum from raw materials, according to Stanford University.<sup>34</sup> Moreover, one ton of recycled aluminum (equivalent to about 64,000 cans) saves 14,000 kilowatt hours of energy.<sup>35</sup>

Metal packages are far more likely to be recycled, thus helping recycling programs. Aluminum's high market value helps support municipal recycling programs across the country. According to the Recycling Partnership's 2020 State of Curbside Report, aluminum cans represent just 3 percent (by weight) of all recyclable materials generated in single family homes, but account for nearly half the total market value of all materials. 37

Metal packaging also contributes to sustainability by prolonging shelf life and minimizing microbiological deterioration. Commercially canned food retains quality and taste for two to five years, leading to less waste.<sup>38</sup> Canned food also never requires refrigeration, further reducing energy consumption and greenhouse gas emissions.

# Many Consumers Are Being Misinformed About Products' Recyclability

Despite their good intentions, environmentally conscious consumers are often misinformed about the recyclability of materials. In a national poll, only 8 percent of respondents thought metal was the most recyclable food packaging material, while 26 percent mistakenly chose plastic.<sup>39</sup> In the same poll, 58 percent of respondents thought plastic was

<sup>&</sup>lt;sup>33</sup> "Study Finds Aluminum Cans the Sustainable Package of Choice," The Aluminum Association, News Release, May 20, 2015, <a href="https://www.aluminum.org/news/study-finds-aluminum-cans-sustainable-package-choice">https://www.aluminum.org/news/study-finds-aluminum-cans-sustainable-package-choice</a>.

<sup>&</sup>lt;sup>34</sup> "Frequently Asked Questions: Benefits of Recycling," Stanford University, PSSI/Stanford Recycling, https://lbre.stanford.edu/pssistanford-recycling/frequently-asked-questions/frequently-asked-questions-benefits-recycling.

<sup>&</sup>lt;sup>35</sup> Ibid.

<sup>&</sup>lt;sup>36</sup> It is estimated that recycling aluminum cans returns \$1 billion to local communities each year, see Larry West, "The Benefits of Aluminum Recycling," ThoughtCo., July 24, 2019, <a href="https://www.thoughtco.com/the-benefits-of-aluminum-recycling-1204138">https://www.thoughtco.com/the-benefits-of-aluminum-recycling-1204138</a>.

<sup>&</sup>lt;sup>37</sup> Scott Mouw, "2020: State of Curbside Recycling Report," The Recycling Partnership, February 13, 2020, https://recyclingpartnership.org/wp-content/uploads/dlm\_uploads/2020/02/2020-State-of-Curbside-Recycling.pdf.

<sup>&</sup>lt;sup>38</sup> "How Long Can You Keep Canned Goods?" Ask USDA, U.S. Department of Agriculture, July 17, 2019, https://ask.usda.gov/s/article/How-long-can-you-keep-canned-goods.

<sup>&</sup>lt;sup>39</sup> Consumer Action, Survey results, July 2019, <a href="https://www.consumer-action.org/downloads/Recycling Survey July2019.pdf">https://www.consumer-action.org/downloads/Recycling Survey July2019.pdf</a>.

endlessly recyclable, while only 65 percent recognized that steel could be endlessly recycled (see Figure 1).

100% 25% 29% 35% 42% 75% 75% 58% 50% 25% 0% Cardboard Plastic Glass Steel No Yes

Figure 1: Based on what you know about this issue, do you believe the following materials are endlessly recyclable?

Source: Consumer Action survey of 1,000 American adults, July 2019

Brands and retailers can play an important role in educating the public about the sustainability of certain packaging materials. Evidence shows that consumers are open to changing their views and behavior in response to new information. The same poll found that, after being informed that metal could be recycled indefinitely, 77 percent of respondents were "somewhat" or "strongly" supportive of companies moving their packaged goods from single-use plastic containers to containers made out of metal.<sup>40</sup>

# **Metal Food Packaging Could Help Solve Recycling Challenges**

Recycling is becoming more difficult and less economically feasible, and fewer municipalities in the U.S. are offering recycling programs. Single-stream recycling, in which households place all recyclables in the same receptacle and different materials are later separated at a processing facility, is the primary curbside collection system in the U.S.<sup>41</sup>

<sup>&</sup>lt;sup>40</sup> Ibid.

<sup>&</sup>lt;sup>41</sup> "Single-Stream Recycling," Container Recycling Institute, <a href="http://www.container-recycling.org/index.php/issues/single-stream-recycling.">http://www.container-recycling.org/index.php/issues/single-stream-recycling.</a>

While the convenience of single-stream recycling leads to more collections, it also requires special measures to screen for hazardous items and non-recyclables, making sorting and processing materials more expensive.

The difficulty of separating materials in a single-stream system partly explains the recent slump in demand for U.S. recyclables in international markets.<sup>42</sup> In response to decisions by China and other East Asian nations to stop accepting many recyclables from the U.S., a growing number of municipalities are enacting massive fee increases or canceling their recycling programs altogether.<sup>43</sup> One of China's complaints was that too much trash was mixed in with recyclable materials.

Plastics present a significant challenge for recycling across the country. Indeed, recycling certain types of plastics, especially from single-stream bins, can cost more than the material is worth. 44 On the other hand, metal packaging, like aluminum and steel, is magnetic, making it easier than other materials to sort. This can help make the process less expensive. Recycling metal can also be a meaningful source of revenue for municipalities. 45

By reducing the use of plastic, carton, and flexible packaging and offering more environmentally sustainable choices, companies can support municipalities' recycling programs and keep them viable.

# **Expanding the Use of Metal in Food and Beverage Packaging**

Offering consumers a broad range of packaging options, along with information about the environmental impact of different materials, is paramount to ensuring consumers can continue to shop sustainably. Metals have been used for decades in food and beverage packaging, including drink cans, food cans, lids and bottle tops, foils, tubes, and aerosol containers. Now, with sustainability increasingly becoming a priority for consumers around the world and given the environmental benefits, retailers should work to expand the use of metal packaging in their mix of products.

<sup>&</sup>lt;sup>42</sup> Paul Singer, "Recycling Is in Trouble – and It Might Be Your Fault," *USA Today*, April 20, 2017, <a href="https://www.usatoday.com/story/news/politics/2017/04/20/weak-markets-make-consumers-wishful-recycling-big-problem/100654976/">https://www.usatoday.com/story/news/politics/2017/04/20/weak-markets-make-consumers-wishful-recycling-big-problem/100654976/</a>.

<sup>&</sup>lt;sup>43</sup> Jeff Spross, "America Has a Recycling Problem; Here's How to Solve It," The Week, February 11, 2019, https://theweek.com/articles/819488/america-recycling-problem-heres-how-solve.

<sup>&</sup>lt;sup>44</sup> Sarah Kramer, "The One Thing That Makes Recycling Plastic Work Is Falling Apart," *Business Insider*, April 5, 2016, <a href="https://www.businessinsider.com/low-oil-prices-hurt-plastics-recycling-2016-4">https://www.businessinsider.com/low-oil-prices-hurt-plastics-recycling-2016-4</a>.

<sup>&</sup>lt;sup>45</sup> It is estimated that recycling aluminum cans returns \$1 billion to local communities each year, see Larry West, "The Benefits of Aluminum Recycling," ThoughtCo., July 24, 2019, <a href="https://www.thoughtco.com/the-benefits-of-aluminum-recycling-1204138">https://www.thoughtco.com/the-benefits-of-aluminum-recycling-1204138</a>.

Some companies have already begun. The largest bottled water brands in the U.S., Coca-Cola's Dasani and PepsiCo's Aquafina, both recently announced plans to transition to aluminum cans, citing environmental benefits. <sup>46</sup> Meanwhile, the popularity of canned cold coffee is growing, <sup>47</sup> and canned wine makers reported 43 percent sales growth from 2017 to 2018. <sup>48</sup> Many craft breweries are using cans for their products, noting that they stay fresher and keep longer than in bottles, <sup>49</sup> while some have introduced "crowlers" to substitute for popular glass growlers. <sup>50</sup>

And it's not just beverages. Several brands have partnered with TerraCycle, a waste management company, in its Loop project to deliver reusable packaging to customers. Last year, Unilever unveiled a refillable steel design for its Axe, Degree, and Dove brands of deodorant, <sup>51</sup> while Quaker Oats Company and Häagen-Dazs are testing refillable stainless steel tins for their products. <sup>52</sup> Procter & Gamble's Pantene brand has introduced a new aluminum bottle for its shampoo and conditioner, and its Tide brand detergent is now available in stainless steel containers. <sup>53</sup>

National polling data shows that consumers want these trends to continue. For example, 80 percent of Americans would at least consider buying pasta sauce in metal containers, while strong majorities would consider buying fruit juices and sports drinks in metal packaging.<sup>54</sup> Given the environmental benefits (see Figure 2), switching to more metal food and beverage packaging would help meet consumer demand.

<sup>&</sup>lt;sup>46</sup> Jordan Davidson, "Dasani Water Will Soon Be Sold in Aluminum Cans," EcoWatch, August 14, 2019, https://www.ecowatch.com/dasani-aluminum-cans-2639822829.html.

<sup>&</sup>lt;sup>47</sup> Sierra Tishgart, "Why Gourmet Coffee Roasters Are Racing To Perfect Canned Drinks," Grub Street, April 20, 2016, <a href="https://www.grubstreet.com/2016/04/canned-coffee-boom.html">https://www.grubstreet.com/2016/04/canned-coffee-boom.html</a>.
<a href="https://www.grubstreet.com/2016/04/canned-coffee-boom.html">https://www.grubstreet.com/2016/04/canned-coffee-boom.html</a>.

<sup>&</sup>lt;sup>48</sup> Sarah Whitten, "Canned Wine is No Longer a Fad, It's a \$45 Million Business," *CNBC*, August 22, 2018, <a href="https://www.cnbc.com/2018/08/31/canned-wine-is-no-longer-a-trend-its-a-45-million-industry.html">https://www.cnbc.com/2018/08/31/canned-wine-is-no-longer-a-trend-its-a-45-million-industry.html</a>.

<sup>&</sup>lt;sup>49</sup> Bart Watson, "Craft Brewers and Cans," Insights and Analysis, Brewers, association for Small and Independent Craft Brewers, October 19, 2015, https://www.brewersassociation.org/insights/craft-brewers-and-cans/.

<sup>&</sup>lt;sup>50</sup> Alex Delany, "Why the World Needs More Crowlers, *Bon Appetit Magazine*, February 11, 2016, https://www.bonappetit.com/drinks/beer/article/what-is-a-crowler-beer

<sup>&</sup>lt;sup>51</sup> "Unilever Innovates Durable, Reusable and Refillable Packaging to Help Eliminate Waste," Unilever news release, January 24, 2019, <a href="https://www.unilever.com/news/press-releases/2019/unilever-innovates-durable-reusable-and-refillable-packaging-to-help-eliminate-waste.html">https://www.unilever.com/news/press-releases/2019/unilever-innovates-durable-reusable-and-refillable-packaging-to-help-eliminate-waste.html</a>.

<sup>&</sup>lt;sup>52</sup> Gaby Del Valle, "Big Brands Like Häagen-Dazs and Tide Are Testing Reusable Packaging, Vox, January 24 2019, https://www.vox.com/the-goods/2019/1/24/18196388/unilever-pepsico-procter-gamble-reusable-packaging.

<sup>&</sup>lt;sup>53</sup> "P&G Joins TerraCycle's Loop – An Environmentally Friendly and Convenient E-Shopping Platform – with 11 Household Brands," Proctor & Gamble news release, January 24, 2019,

 $<sup>\</sup>frac{https://www.businesswire.com/news/home/20190124005087/en/PG-Joins-TerraCycle's-Loop----Environmentally-Friendly.$ 

<sup>&</sup>lt;sup>54</sup> Consumer Action Survey results, July 2019, <a href="https://www.consumer-action.org/downloads/Recycling Survey July2019.pdf">https://www.consumer-action.org/downloads/Recycling Survey July2019.pdf</a>.

Figure 2: Of the Following Types of Products, Which Best Describes Your Views on the Packaging?

	Would be happy to buy in metal containers	Would consider buying in metal containers	Would never buy in metal containers
Pasta sauce	45%	35%	20%
Condiments (pickles, jalapenos, green olives)	44%	34%	22%
Fruit juice	32%	35%	34%
Sports drinks	30%	33%	36%
Water	29%	28%	43%

Source: Consumer Action, <u>survey</u> of 1,000 American adults, July 2019.

#### Conclusion

More and more, consumers are considering sustainability to be an important factor in what they shop and choose which businesses they support. Thus, companies that provide everyday products should endeavor to offer consumers more sustainable food and beverage packaging choices. By recognizing the environmental benefits of metal, including steel and aluminum, and expanding the use of these materials across product categories, companies can do their part to reduce waste, ensure the continued viability of recycling in the U.S., and meet consumers' expectations.

Blindly offering consumers products labeled as "recyclable," without acknowledging that these downcycled materials are ultimately on their way to landfills, ignores the global pollution crisis, the economics of sustainability, and the growing demand from consumers for more sustainable choices. Companies should adopt packaging that favors more sustainable options, including metal, that can lead to an increase in more sustainable consumer behavior, thus contributing to a more circular economy.

Businesses involved in packaging food and beverage products, as well as retailers who sell those products, can also put forth more effort into consumer education to dispel common misconceptions about recyclability, while equipping consumers with the right information to help them make better informed decisions.