Print, Paper and Paper Packaging have a great environmental story to tell

TWO SIDES

www.twosidesna.org

Two Sides North America is an independent, non-profit organization and is part of the Two Sides global network which includes more than 600 member companies across North America, South America, Europe, Australia and South Africa. Our member companies span the Paper-based Packaging and Graphic Communications industry.

The paper-based packaging industry has long been committed to continuous environmental performance improvement and to transparently conveying the environmental impacts of its operations and products. With growing consumer, business and political interest in packaging and its role in the transition to a more sustainable, circular economy, the opportunities to communicate the inherently sustainable benefits of paper-based packaging with straightforward, credible and relatable information are greater than ever before.

This booklet provides 7 powerful reasons why paper-based packaging is the natural choice for brands, retailers and consumers. By fostering a better understanding of the industry's environmental credentials, Two Sides seeks to ensure that paper products, through their myriad uses, remain an essential part of everyday life.

Membership

Membership in Two Sides shows that your organization regards environmental responsibility as an essential part of its business strategy. Benefits of membership include access to materials and information, the opportunity to interact with our industry experts and member network, and the ability to augment your organization's own sustainability messaging and environmental credibility with customers, employees and other stakeholders.

To find out how to join, visit
www.twosidesna.org/become-a-member/

“There aren’t many industries around that can aspire to becoming genuinely sustainable. The paper industry, however, is one of them; it is inherently sustainable.”

Jonathon Porritt, Co-Founder, Forum for the Future

2 **Paper-based Packaging** provides environmental and social benefits

4 **Paper-based Packaging** is recycled more than any other packaging material

6 **Paper-based Packaging** protects more resources than it uses

8 **Paper-based Packaging** supports healthy forests in North America

10 **Paper-based Packaging** helps tackle climate change

12 **Paper-based Packaging** is practical, beneficial and appealing

14 **Paper-based Packaging** is preferred by consumers

16 **Sources**

The Fact

Paper-Based Packaging Provides Environmental And Social Benefits

Paper-based packaging is made with a renewable natural resource – trees grown in sustainably managed forests – and when well-designed, efficiently manufactured, appropriately used and recycled at the end of its useful life, provides a host of benefits for people and the planet.

The strength and durability of paper-based packaging powers global commerce by ensuring the safe and efficient transport of goods, and its versatility and visual appeal help businesses effectively market their products. It communicates vital information to consumers, and provides the tactile pleasure that comes with receiving a special delivery or opening a gift. And importantly, when paper-based packaging is recycled it extends the life of the natural resources used to produce it and prevents waste from going to landfills.

> ***"Responsible pulp and paper operations bring many benefits to forests, local economies and people, particularly in rural areas. Many pulp and paper companies are demonstrating leadership in responsible forestry and plantation management as well as in clean manufacturing processes and recycled content."***
>
> World Wildlife Fund, 2020[1]

The paper and wood products industry is inherently circular in its supply chain, from the regeneration of renewable resources (trees) that supply fiber to recycling packaging and paper that is recovered and turned into new products. The industry manufactures more with less by efficiently using wood fiber, reusing water and pulping chemicals multiple times, utilizing manufacturing residuals and by-products to produce carbon-neutral biomass energy and optimizing the use of non-renewable resources.[2]

The forest products sector is central to the ongoing transition to a low-carbon and circular future rooted in renewable natural resources, also known as the bioeconomy. With their ability to capture and store carbon, fiber-based materials feed into a broad array of renewable solutions that can substitute non-renewable and fossil-based materials in products we use every day.[3]

> ***"Paper offers inspiration – a widely used and recyclable packaging material that is relatively benign if leaked into the environment."***
>
> World Economic Forum, 2016[4]

Paper and paperboard packaging – which includes corrugated cardboard boxes, folding cartons, rigid paperboard boxes, flexible packaging, sacks and bags – is often the preferred sustainable packaging choice of consumers.[5] Its key raw material, wood fiber, is a renewable resource and it's also the most recycled of all types of packaging materials.[6]

The Fact

Paper-Based Packaging Is Recycled More Than Any Other Packaging Material

The benefits of recycling paper-based packaging include extending the supply of a valuable natural resource (wood fiber), saving landfill space, avoiding greenhouse gas emissions of methane released when paper decomposes in landfills and reducing the amount of energy needed to produce some paper products.

Nearly 81% of all paper-based packaging in the U.S. is recovered for recycling, and more than 96% of corrugated (cardboard) boxes are recycled. Only 14% of U.S. plastic packaging is recycled.[6] In Canada, the national recovery rate of old corrugated boxes for recycling is an estimated 85%, with at least one provincial recycling program reaching 98%[7]. Corrugated box fibers are recycled 7-10 times to make new boxes and other paper products.[8]

> ***"Globally, only 14% of plastic packaging is collected for recycling. In addition, plastic packaging is almost exclusively single-use, especially in business-to-consumer applications. Plastics that do get recycled are mostly recycled into lower-value applications that are not again recyclable after use."***
>
> World Economic Forum, 2016[9]

Around 90% of folding cartons (by the ton) in North America sent to the frozen foods sector are made of recyclable paperboard, and are easily recyclable in the normal waste stream.[10]

In addition to being recyclable, paper and cardboard packaging is made with recycled fiber. In the U.S. for example, the average corrugated box is made with 50% recycled content, and nearly all old corrugated containers are used to make new paper products.[11]

In Canada, corrugated boxes and boxboard used for products like cereal and shoe boxes are mostly 100% recycled content.[12]

Nearly all Americans[13] and Canadians[14] have access to community curbside and/or drop-off recycling programs for paper and paper-based packaging.

> ***"Today, 95% of plastic packaging material value, or $80 billion to $120 billion US annually, is lost to the economy after a short first use. The best research currently available estimates that there are over 150 million tons of plastics in the ocean today. The ocean is expected to contain one ton of plastic for every three tons of fish by 2025, and by 2050, more plastics than fish (by weight)."***
>
> Ellen MacArthur Foundation, 2017[15]

The Fact

Paper-Based Packaging Protects More Resources Than It Consumes

Paper-based packaging is a versatile, cost-efficient and safe method to transport, protect and preserve a wide array of items. It is engineered to be sturdy, yet lightweight, and is customizable to meet product- or customer-specific needs.

> ***Corrugated containerboard is used to ship and transport everything from electronics to fragile glassware to perishable goods for industrial and residential use; paperboard packages food, medicine and toiletries for handy storage and display; paper bags give customers a sustainable option to safely carry their purchases home; and paper shipping sacks are often used to package and ship bulk materials like cement, animal feed or flour.***
>
> American Forest and Paper Association, 2020[16]

Packaging plays a critical role in protecting products and resources, and often helps reduce and prevent waste—especially when it comes to food.[17]

On average, packaging makes up only 10% of a food product's energy footprint. In contrast, the food itself accounts for about 50% of the product's energy footprint. So, protecting that food through packaging means keeping a big part of its footprint in check.[17]

Cities exist with the help of packaging. Most of the food and other goods they require are grown and produced outside of urban centers.[17] In 2019, 271 million Americans lived in urban areas; 31 million Canadians lived in urban areas.[18]

> ***The optimal packaging solution provides sufficient protection while minimizing its impact on the environment.***
>
> World Wildlife Fund, 2014[17]

Corrugated packaging can be a critical supply-chain efficiency tool for cost-effective product protection from products' points of origin to their points of purchase and end-use.[19]

When the results of the available field surveys are compared to the acceptable limit for microbial loads on corrugated containers versus reusable plastic containers (RPC) for fresh produce, 100% of corrugated containers met acceptable sanitation standards while percentages as low as 50% of RPCs evaluated did not meet these same standards.[20]

The Recycled Paperboard Technical Association (RPTA) has developed a comprehensive program of testing and management systems, and uses a rigorous auditing process conducted by NSF International to assure brand owners that paper-based packaging products produced at North American RPTA-member mills are suitably pure for direct food contact packaging applications and meet all U.S. Food and Drug Administration regulatory requirements that apply to recycled paperboard and corrugated board use in food packaging.[21]

The Fact

Paper-Based Packaging Supports Healthy Forests In North America

Sustainable forest management protects one of earth's most important resources and ensures the long-term ability of the global forest products industry to meet society's growing needs.

The use of wood fiber from sustainably managed forests promotes responsible long-term forest growth, so successfully in fact, that U.S. forest area expanded an average of approximately 605,000 acres per year between 1990 and 2020.[22] Canada's forested area has remained quite stable for the past 25 years at approximately 857 million acres.[23]

> ***"Demand for paper products means continued demand for trees, which encourages forest landowners to grow and replant to ensure a supply – even in places where there are no trees now. Through sustainable forest management, tree farmers harvest and replant trees responsibly, taking into consideration wildlife, diversity of plant species and forests' ability to create watersheds and sequester carbon."***
>
> American Forest and Paper Association, 2020[24]

In 2019, 52% of the forest area in North America was certified to an independent, sustainable forest management standard (Sustainable Forestry Initiative® (SFI®), Forest Stewardship Council® (FSC®), Programme for the Endorsement of Forest Certification (PEFC), the highest percentage of certified forestland anywhere in the world.[22]

The production of paper-based packaging does not result in deforestation. Deforestation is defined as the conversion of forest to other land use independently, whether human-induced or not. The term specifically excludes areas where trees have been removed as a result of harvesting or logging, and where the forest is expected to regenerate naturally or with the aid of silvicultural measures.[22]

> ***"As long as there is demand for forest products, the forest products industry and the landowners who supply the industry will have vested interests in maintaining productive and sustainable forests, as has clearly been the case over the last six decades."***
>
> Forest2Market, Inc., 2017[25]

The biggest threat to forests in the U.S. is urbanization, but this threat can be mitigated by healthy markets for forest products, especially for products from highly productive working forests. Between 1982 and 2012, urban development was responsible for almost half (49.2% or 17.7 million acres) of all forestland that was converted to other uses in the United States.[25]

The conversion of forest to agricultural land is decreasing but remains the largest contributor to deforestation in Canada. Harvesting, forest fires and insect infestations do not constitute deforestation since the affected areas will grow back. According to laws, regulations and policies in place across Canada, all areas harvested on public land must be reforested, either by replanting or through natural regeneration. About 94% of Canada's forests are on public land.[26]

The Fact

Paper-Based Packaging Helps Tackle Climate Change

There are three ways to mitigate climate change: by avoiding greenhouse gas (GHG) emissions, by storing GHGs (carbon) in forests and forest-based products, and by capturing GHGs from the atmosphere. The manufacture, use and recycling of paper-based packaging contributes to all three.

Sustainable forestry practices increase the ability of forests to capture and sequester atmospheric carbon while enhancing other ecosystem services, such as improved soil and water quality. Planting new trees and improving forest health through thinning and prescribed burning are some of the ways to increase forest carbon in the long run. Harvesting and regenerating forests can also result in net carbon sequestration in wood products and new forest growth.[27]

> ***"In the long term, a sustainable forest management strategy aimed at maintaining or increasing forest carbon stocks, while producing an annual sustained yield of timber, fiber or energy from the forest, will generate the largest sustained [climate change] mitigation benefit."***
>
> Intergovernmental Panel on Climate Change, 2018[28]

The forest products industry plays an important role in contributing to the production of renewable energy and reducing dependence on fossil fuel by using residuals and byproducts (biomass) to produce much of the energy required for its operations. Because trees absorb CO_2 when they grow, the international carbon accounting principle accepts that biomass is carbon neutral when combusted for energy.[29]

> ***"The carbon neutrality of biomass harvested from sustainably managed forests has been recognized repeatedly by an abundance of studies, national legislation and international policy, including the guidance of the Intergovernmental Panel on Climate Change (IPCC) and the reporting protocols of the United Nations Framework Convention on Climate Change."***
>
> International Council of Forest and Paper Associations, 2020[29]

The U.S. paper and forest products industry reduced carbon emissions by 23.3% between 2005 and 2018. The Canadian paper and forest products industry reduced its greenhouse gas emissions by 38% between 2006 and 2016.[2,30]

The recycling of paper-based packaging avoids greenhouse gas emissions that result when paper products are landfilled. At about 44.2 million tons, paper and paperboard recycling in the U.S. resulted in a reduction of about 148 million tons of carbon dioxide equivalents (CO_2e) in 2017. This reduction is equivalent to removing over 31 million cars from the road for one year.[31]

Nearly every piece of plastic begins as a fossil fuel, and greenhouse gases are emitted at each stage of the plastic lifecycle: 1) fossil fuel extraction and transport, 2) plastic refining and manufacture, 3) managing plastic waste, and 4) plastic's ongoing impact once it reaches our oceans, waterways, and landscape.[32]

The Fact

Paper-Based Packaging Is Practical, Beneficial And Appealing

Paper and cardboard are versatile and effective packaging materials, whether for storage or in transit, displayed in-store or used in the home.

Corrugated cardboard boxes are the backbone of the American supply chain. Some 38 billion packages are delivered safely in corrugated cardboard boxes each year. Corrugated packaging is frequently lightweight and can reduce shipping costs.[33]

> ***"Using materials that are not recyclable could cause a brand to be regarded as 'wasteful,' and customers may share their unboxing experience for the wrong reasons. In the reverse, using sustainable products will go a long way to helping a brand to cultivate an image of strong ethics and social responsibility."***
>
> BigCommerce, 2019[34]

> ***"In recent years, unboxing has gone from being a seasonal pleasure, to an online fad, to a powerful e-commerce marketing tool."***
>
> BigCommerce, 2019[34]

Most Americans (83%) agree that paper and cardboard packaging can be innovative. In fact, roughly seven in 10 feel that this type of packaging allows for more creative packaging designs than other packaging materials (75%) and that products packaged in paper or cardboard seem more artisanal or hand-crafted (69%).[35]

Corrugated cardboard can be cut and folded into an infinite variety of shapes and sizes and direct printed with high-resolution color graphics. Corrugated is custom designed to fit specific product protection, shelf space and shipping density requirements, including inner packaging that prevents shifting.[36]

With the rise of plastic pollution, countless brands are opting for a more sustainable branding solution when it comes to their products' packaging. This is where paper comes in. The eco-friendly material is recyclable and lightweight, making it perfect for food, coffee or dessert products. In addition to its environmentally friendly qualities, paper packaging is also easy to customize when it comes to color, text or graphics.[37]

The Fact

Paper-Based Packaging Is Preferred By Consumers

People look to product packaging to help them make decisions about what to buy. Perceptions of practicality, sustainability and quality all play a part.

When asked to rank their preferred packaging materials (paper and cardboard, glass, metal or plastic) based on 15 environmental, practical and visual/tactile attributes, U.S. consumers ranked paper and cardboard packaging highest on 11 of 15 attributes, with 66% saying paper and cardboard packaging are better for the environment.[38]

> ***"The increasing consumer consciousness regarding sustainable packaging, as well as the strict regulations imposed by various environmental protection agencies (regarding the use of environment-friendly packaging products) are the factors driving the market for paper packaging."***
>
> Mordor Intelligence, 2020[39]

68% of U.S. grocery shoppers ages 18 to 65 years consider it important to choose foods and beverages that are packaged responsibly, and 71% agree that foods and beverages with healthier ingredients should use packaging materials that are healthier too. Paper and glass packaging are considered to have the least negative environmental impact and perceived to be the healthiest options.[40]

Consumers across the United States are willing to change their behavior to shop more sustainably. Nearly four in 10 (38%) are willing to spend more on a product if it is packaged using sustainable materials, and more than a third (36%) said they would consider avoiding a retailer who is not taking steps to reduce their use of non-recyclable plastic packaging.[41]

Most Americans agree that the design of a product's packaging (72%) and the materials used to package a product (67%) often influence their purchase decisions when selecting which products to buy. For two thirds, paper and cardboard packaging makes a product more attractive than other packaging materials (67%), and a similar proportion agrees that paper and cardboard packaging make products seem premium or high quality (63%).[42]

When asked which types of shopping bags – cotton/canvas, paper, lightweight plastic, lightweight compostable plastic and heavyweight plastic – best fit a variety of attributes, U.S. consumers ranked paper shopping bags highest when it comes to the environment, favoring paper bags for being recyclable, compostable and made from renewable and recycled materials.[5]

Sources

1. World Wildlife Fund, 2020
2. American Forest & Paper Association (AF&PA), 2020
3. World Business Council for Sustainable Development, 2019
4. World Economic Forum (WEC), 2016
5. Two Sides and Toluna, 2020
6. U.S. Environmental Protection Agency (EPA), 2017
7. Paper and Paperboard Environmental Council, 2020
8. Fibre Box Association (FBA), 2020
9. WEC, 2016
10. Paperboard Packaging Council, 2019
11. FBA, 2020
12. Paper & Paperboard Packaging Environmental Council (PPEC), 2019
13. AF&PA, 2019
14. PPEC, 2020
15. Ellen MacArthur Foundation, 2017
16. AF&PA, 2020
17. World Wildlife Fund, 2014
18. The World Bank, 2020
19. FBA, 2020
20. Haley & Aldrich, Inc., 2015
21. Recycled Paperboard Technical Association, 2020
22. UN Food and Agriculture Organization (FAO), 2020
23. Natural Resources Canada (NRCan), 2019
24. AF&PA, 2020
25. Forest2Market, Inc., 2017
26. NRCan, 2020
27. USDA Forest Service, 2020
28. Intergovernmental Panel on Climate Change, 2018
29. International Council of Forest and Paper Associations (ICFPA), 2020
30. NRCan, 2019
31. US EPA, 2020
32. Center for International Environmental Law, 2019
33. FBA, 2020
34. BigCommerce, 2019
35. Ipsos, 2018
36. FBA, 2019
37. Trend Hunter, 2014
38. Two Sides and Toluna, 2020
39. Mordor Intelligence, 2020
40. EcoFocus, 2018
41. Two Sides and Toluna, 2020
42. Ipsos, 2018

Copyright © 2021, Two Sides North America, Inc., All Rights Reserved
The information in this booklet is carefully researched and obtained from third party sources. Two Sides accepts no liability for inaccurate information.

Two Sides North America, Inc.
330 N. Wabash Avenue
Suite 2000
Chicago, IL 60611

937-999-7729
www.twosidesna.org
info@twosidesna.org

@TwoSidesNorthAmerica
@TwoSidesNA
Two Sides North America

Print, Paper and Paper Packaging have a great environmental story to tell

TWO SIDES
www.twosidesna.org