There is great interest in finding ways to reduce or even eliminate packaging. This concern is due largely to the public’s perception that much of the packaging they experience is unnecessary and even wasteful.

The reality, however, is quite different. An objective, science-based approach reveals that packaging protects the economic, environmental, and social value of the products it contains. In fact, effective packaging actually helps prevent waste.

Packaging offers much more than meets the eye.

Packaging can help reduce food waste and greenhouse gas generation while increasing convenience for consumers.
Packaging affects the U.S. economy in a variety of positive ways. It is a significant contributor to employment levels and gross domestic product (GDP). Its ability to preserve, protect, and educate (via labeling) helps reduce costs associated with product breakage, contamination, spoilage, and misuse. Well-designed packaging can also help lower costs by enabling more efficient use of space during delivery and storage throughout the value chain. The following examples provide details on just a few economic benefits of packaging:

**Economic benefits**

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- According to the United States Census Bureau, over 750,000 people are employed in the U.S. packaging industry, including:
  - Consumer and industrial goods manufacturers
  - Packaging designers
  - Materials suppliers
  - Packaging producers
  - Distributors
  - Shippers
  - Warehousers
  - Logistics personnel
  - Retailers

In addition, the U.S. Department of Commerce states that the economic value of the packaging industry is approximately $200 billion, or about 2 percent of U.S. GDP.
Studies by the U.S. Department of Agriculture (USDA) and University of Arizona Garbage Project indicate that 33-50 percent of all food purchased in America is wasted. This obviously has enormous economic impact on businesses, institutions, restaurants, and consumers. Based on U.S. Census Bureau estimates that Americans purchase over $1 trillion worth of food and beverages per year, wasting 33 percent would result in economic waste of over $300 billion – $1,000 per person, or $2,600 per household.

One way to help reduce this incredible waste is through the use of packaging that not only provides proper preparation and use information, but also allows convenient portion control, measurement, and use. As a result, a little bit of packaging can help reduce waste and save families a whole lot of money.

For example, making a salad has historically required buying a head of lettuce, carrots, etc. These ingredients, however, must be prepared for serving before the salad can be eaten. Since we typically don’t eat the entire vegetable, this process produces waste. (Remember, cleaning also consumes water.)

If instead, we buy bags of ready-to-eat salad, only the edible parts are included. The rest is used for animal feed, keeping it out of the trash bin and providing additional economic value. Transporting only the edible ingredients also produces more efficient results per unit of transportation, helping reduce both fuel consumption and the related carbon dioxide production. (Anecdotal evidence suggests that the convenience of pre-packaged salads helps ensure they actually get served, which also helps reduce food waste.)
Environmental benefits

The containment, protection, preservation, and education capabilities of packaging can play major roles in environmental efforts. By reducing the consumption of raw materials and energy as well as the generation of greenhouse gas (GHG) and solid waste, packaging helps enable the production and distribution of more goods with fewer resources. For example:

- Studies by The ULS (Use Less Stuff) Report and The Industry Council for Packaging and the Environment (INCPEN)(1) show that packaging only accounts for 7-10 percent of the total environmental impact of a product. The figure below graphically illustrates this point in terms of the energy required throughout the life cycle of a dairy product. By protecting the product, a small amount of packaging significantly reduces the relatively large amount of environmental (and economic) waste that can result from product breakage, spoilage, mishandling, and/or misuse.

Where Does the Energy Go?

- Another recent study indicated that food packaging can significantly reduce GHG generation by reducing food spoilage and waste. By preventing 10-20 percent of food loss, it’s estimated that packaging can offer GHG benefits 4-9 times higher than the GHG emissions associated with packaging production [Source: The impact of plastics on life cycle energy consumption and GHG emissions in Europe, Denkstatt GmbH].

Converted to U.S. equivalents, the energy savings that correlate to this data could annually power the homes, cars, and lives of about 6.8 million Americans [Source: U.S. Census Bureau].

(1) Not affiliated with AMERIPEN.
(2) Based on INCPEN data with a total of 4,944-5,111 kilowatt hours (17.8-18.4 gigajoules) of energy used in the lifetime of the dairy product tested.
Social benefits

We live in a highly fragmented society with fast-paced lifestyles that put a strain on our ability to manage our time. As a result, we’re always looking for simple, convenient ways in which we can safely, economically, and effectively provide for our families.

Packaging plays a major role in our ability to meet this need. It ensures that an incredible range of products reach us safely and in excellent condition. Thanks to its ability to protect its contents, packaging helps us bring home the most value using the least amount of time, money, material, energy, and environmental resources. Here are a few examples of the many social benefits offered by packaging:

- Feeding America is the nation’s leading hunger-relief charity, supplying 3 billion pounds of food to 37 million Americans each year. This level of hunger relief would not be possible without packaging’s ability to provide containment and protection along with portion control, preparation, and serving information.

- By ensuring product integrity and reducing the potential for contamination, packaging helps keep us safe:
  - Metal bubble-top lids on baby foods let us know if the product has been opened or has spoiled, should the lid “pop up.”
  - Safety seals and closures ensure that medicines reach us in pristine, uncontaminated condition.
  - Labels communicate important safety and usage information.
  - Mailing envelopes and pouches can be made of special materials that reduce ripping and tearing while retaining ease of opening.
  - Hard-to-duplicate packaging is the first line of defense against counterfeit products, ensuring that we receive the high-quality medicines, electronics, household goods, and clothing we pay for.
  - Packaging reduces theft, helping to keep costs down. (For reference, over $13 billion worth of goods are stolen each year in the United States. Ultimately, we all pay for theft through increased retail pricing.)

In addition to protecting sensitive electronic components, packaging can help prevent counterfeiting and theft.
The goal of AMERIPEN is to provide science-based, credible, and balanced information about packaging and the environment. For more information on the economic, environmental, and social benefits of packaging – or other packaging-related issues – call us at 781-876-8835, visit www.ameripen.org, or drop an email to info@ameripen.org.