



Friendly and affordable

Thomas R. Cutler makes the case for reusable containers,
from a financial and environmental point of view

The EarthWorks Group estimates that thirty percent of landfill waste is created by plastic and paper packaging. The use of cardboard and other one-time-use packaging products contribute significantly to this waste. David Madden, President of ContainerExchanger.com noted, "The initial investment in returnable packaging may cost more than one-time use packaging. However, savings are often quickly realized with returnable packaging because bulk containers, metal bins, and totes are used repeatedly."

Madden also pointed out that labor costs can be reduced by cutting down on the assembly of boxes as well as reduced material handling through fewer moves with stackable containers. Ironically there is an enhanced quality impact, too, since there are fewer rejects due to damaged packaging as well as increased efficiency in floor space usage since plastic and metal containers can be stacked high.

Used plastic reusable containers provide the most cost-efficient shipping approach possible;

corrugated one-way packaging is the least effective and most costly. "When a company is finished using a returnable packaging fleet, we represent the seller and find a buyer for the used bulk packaging. Sellers enjoy a high sales price for a better return on investment. Buyers save significantly in comparison to new packaging prices," added Madden. The average price per trip for a corrugated one-way package is 54 cents, versus a used plastic reusable container at 2½ cents.

Attribute of container	Corrugated one-way	Corrugated reusable	Fiberboard reusable	Reusable plastic	Used plastic reusable
Weight	1.5 lbs	2.2 lbs	5 lbs	5.5 lbs	5.5 lbs
Durability	Poor	Fair	Fair to good	Excellent	Excellent
Est. initial cost	\$0.53	\$1.06	\$6.05	\$11.03	\$6.00
Est. life	1 trip	5 trips	50 trips	250 trips	250 trips
Cost/trip (avg.)	53 cents	21 cents	12 cents	4.4 cents	2.4 cents
Costs	Setup	Setup, return, setup again	Return	Return	Return
	Disposal	Breakdown	Repair		

Buckhorn, Inc., of Milford, Ohio, provided some of this data in *How to Select Shipping Containers*. Container Exchanger provided the used plastic reusable container data.

The per piece packaging costs for used bulk containers and totes can be as low as five percent of the costs for a comparable expendable solution, depending on shipping volumes. Returnable containers provide a way to reduce costs and increase productivity in food handling and distribution because the food containers can go from processors to distributors to retailers efficiently. They offer flexibility to meet the requirements of users throughout the food supply chain. Depending on the specifications required, some containers are molded from FDA/USDA-approved materials and some also resist impact, moisture and temperature extremes of -20 degrees to +120 degrees Fahrenheit.

Nearly a decade ago Sonja Randall reported in *Modern Materials*

Handling, that, "To a grocery retailer entering a produce cooler first thing in the morning it's common to see collapsed corrugated cardboard boxes of fruit and vegetables. Hopefully not a lot of the product is damaged and discarded. And hopefully a lot of time isn't consumed in cleaning the mess."

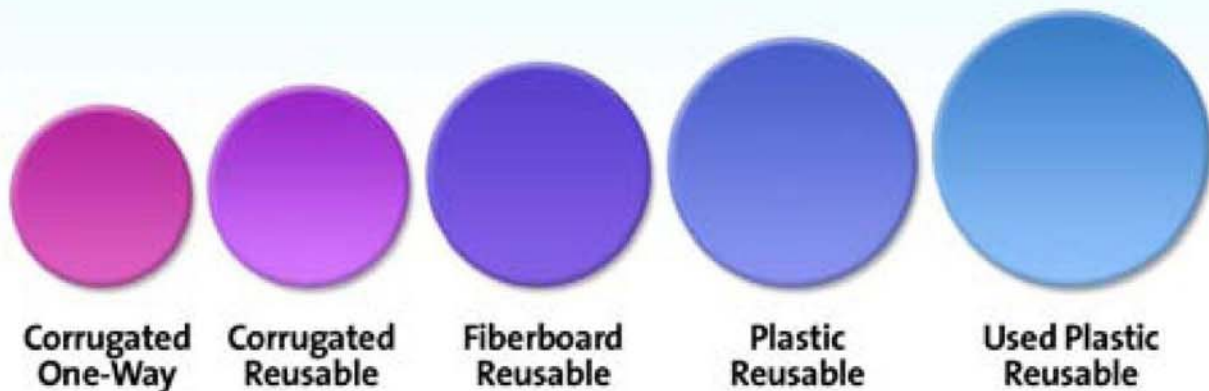
Used pallets can take many different forms. There are plastic Export Pallets that are specifically made for the export market. Plastic pallets meet international shipping guidelines, while wood pallets must be heat treated before they are shipped internationally. Plastic pallets are often more durable than wood pallets, because they are generally all molded in one piece, while wood pallets require nails to hold all the pieces together.

While there are no size requirements for export, certain sizes do work well

in intermodal (sea) containers. The most common size for export pallets measures 43" x 43" or 1100mm x 1100mm. This size of pallet can fit easily side-by-side on a sea container and they are large enough for plenty of product.

Stacking pallets are any pallet with runners. The runners (the strip of material that goes along the bottom of the pallet) go all the way across the bottom of the pallet. These runners serve a couple of purposes. The first is safety. With the runners in place, a loaded forklift can go over rough terrain and not lose the load due to vibration because the runners prevent the plastic pallet from bouncing off the fork tines. The second reason is for stacking. The runners provide a long strip of plastic material, and when the pallet is loaded, the weight from

Shipping Container Efficiency



Least Efficient

Most Efficient

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the load can be distributed over the length of the runner. When this pallet is placed on top of another loaded skid, the presence of the runner distributes weight to decrease the chance of damage to the lower pallet. An added bonus of stacking pallets is that when the pallets are empty and stacked, the forklift holes are readily accessible, which makes them easy to access.

Nesting pallets do not have runners. Instead, these used plastic pallets rest on pedestal feet. These plastic pallets are often made from thermoformed plastic, and as such, have slightly lower carrying capacity. The deep tray of a nesting pallet combined with its lightweight properties make this pallet a good choice for light weight

applications. Many nesting pallets are also used with plastic top-caps for the same skid of product. The top-cap prevents any material damage when another pallet is stacked on top, and it helps secure the load when the pedestal feet cross-link together. These plastic pallets are used more frequently in circular supply operations between manufacturing plants.

The International Food Container Organization (IFCO US) now has hundreds of growers/shippers in North America and it is predicted that food processing plants will dramatically increase their use of returnable containers. Product handling is reduced with some of these returnable containers because produce is often

packed directly into containers where it remains until purchased by the general public. Reduced handling reduces product damage.

Increasingly manufacturers and distributors are changing entire storage and packaging components to returnable containers. Beyond the public relations benefit of being environmentally conscientious, genuine corporate citizenship is frequently sincere and demonstrated through practice. Madden pointed to the bottom-line. "Since returnable containers enhance safety and quality issues, and are far more cost efficient, it is not a difficult choice for many organizations to shift their packaging and storage approach." ■