How Corrugated Pallets Reduce Emissions

There are three key ways that corrugated pallets can reduce carbon emissions:

1. significantly reducing the weight of palletized shipments;
2. increasing the amount of product that can fit in a truck, thereby lowering the number of trucks needed to transport the same amount of product; and
3. eliminating entire truck segments associated with wood and plastic pallet retrieval.

Reducing Emissions and Fuel Usage by Eliminating Weight

There are an estimated 10 billion palletized shipments every year in the United States. Corrugated pallets weigh ~10 pounds per pallet, while wood pallets weigh ~50 pounds. On a national scale, replacing wood pallets with corrugated ones would result in 400 billion fewer pounds of pallet weight being shipped, every year.

Assuming the average distance a loaded pallet travels is 500 miles, a reduction of 400 billion pallet pounds would result in 35 million fewer metric tons of carbon emissions in the U.S., each year. Reducing carbon emissions by 35 million metric tons is equivalent to driving more than 85.7 billion fewer miles in average gasoline cars or burning 38.3 billion fewer pounds of coal per year.

Reducing Emissions and Traffic by Taking Trucks Off the Road

There are two ways in which corrugated pallets reduce the number of trucks on U.S. roads:

1. Truck bed optimization, which enables fewer trucks to ship just as much product

Corrugated pallets can be dimensioned in a cost-effective manner to fit product loads, which maximizes truck bed volume. For example, since using corrugated pallets instead of wood, IKEA reports shipping the same amount of product via 20-33% fewer truck trips.

Applying IKEA’s low-end 20% reduction in truck usage on a national scale would result in 80 million fewer truck trips per year while shipping the same amount of product.

2. Eliminating entire truck segments

Every wood and plastic pallet in circulation requires trucks to: (i) drive to retrieve it at the end of its use; and (ii) transport it to a landfill or elsewhere. At minimum, this amounts to an additional 25 million truck trips nationwide (assuming each truck retrieving pallets loads to capacity). Recyclable corrugated pallets eliminate these added truck segments by utilizing existing corrugated recycling infrastructure.

Combined, corrugated pallets create a national opportunity to eliminate 105 million truck trips from U.S. roads and highways per year.

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1 2 billion pallets in circulation x 5 uses over lifetime = 10 billion shipments: https://www.1001pallets.com/the-history-of-pallets/
2 https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator
3 Assuming the average truck carries 25 loaded pallets, it requires 400 million trucks to ship 10 billion loaded wood pallets in the U.S. each year.