

## THE LATEST SCIENCE – WHICH BAG IS BETTER FOR THE ENVIRONMENT

### AN ENVIRONMENTAL LIFE CYCLE COMPARISON OF ALL BAGS –2011 U.K. GOVERNMENT ENVIRONMENT AGENCY STUDY REPORT 2011

2011 U.K. Government Environment Agency Study Report 2011 - “A Life Cycle Assessment of Supermarket Carrier Bags” <http://publications.environment-gency.gov.uk/PDF/SCHO0711BUAN-E-E.pdf>

- A Life Cycle Study conducted by the U.K. Government Environment Agency in 2011 -- “A Life Cycle Assessment of Supermarket Carrier Bags” found that:

**the conventional plastic shopping bag, USED ONLY ONCE, had a lower carbon footprint -- out-performed all alternatives USED MULTIPLE TIMES on environmental performance— it had a lower global warming potential (GWP)**

- The U.K. government study compared the environmental impacts of conventional plastic shopping bags (High Density Polyethylene- HDPE) with a number of longer life bags -- cotton, non-woven polypropylene, and low density polyethylene bags-for-life.
- Long-life bags have to be reused many times to match the environmental performance of a plastic shopping bag used just once.
  - Cotton reusable bags have to be reused 131 times.
  - The LDPE bag has to be reused four times.
  - The non-woven polypropylene bag has to be reused 11 times.

#### Primary ReUse Required of Reusable Bags to Match Environmental Performance of ONE Conventional Plastic Shopping Bag

Type of Carrier Bag	HDPE Bag (No Secondary ReUse)	HDPE Bag (40.3% reused as bin liners)	HDPE Bag (100% reused as bin liners)	HDPE Bag(reused 3 times)
Plastic Bag	1 USE	2	2	3
Paper	3 USES	4	7	9
LDPE Bag	4 USES	5	9	12
Non-woven PP Bag	11 USES	14	26	33
Cotton Bag	131 USES	173	327	393