
COMPARATIVE STUDY OF PAPER BAGS AND PLASTIC BAGS(*FASHION ALWAYS CHANGES WITH STANDARD PAPER BAGS*)

Jay Ganesh Tripathi

Research Scholar(Management)

(Shobhit University Meerut)

Address :Anand Bagh Barahata Ayodhya

ABSTRACT- .

This study is concerned with While plastic bags have been very widely used, there has been a recent shift to paper bag products because of their cost and the fact that they are environmentally-friendly. *“Fashion always changes with standard paper bags”*. So demand for paper would go on increasing in times to come. In view of paper industry's strategic role for the society and also for the overall industrial growth it is necessary that the paper industry performs well. Government has completely delicensed the paper industry with effect from 17th July, 1997.

The paper grocery bag is an American innovation and was designed in 1883. It's made from kraft paper – the word 'kraft' coming from the German language meaning 'strong'. Kraft paper is known for its strength and coarse texture. Its strength lends to its reusability.

Keywords- Kraft Paper, Biodegradable, Degradability, Misconceptions, Recycling

Introduction-

Paper industry in India is the 15th largest paper industry in the world. It provides employment to nearly 1.5 million people and contributes Rs 25 billion to the government's kitty. The government regards the paper industry as one of the 35 high priority industries of the country. Due to tough economic times, most major food stuff manufacturers are becoming particular how they package their products. A casual glance at the aisles at the supermarket will tell you that most food is packaged in plastic or paper bags. For decades, plastic bags have competed toe-to-toe with paper bags, from the manufacturing plants to the retail supermarkets. In many countries now especially the United States, shoppers at local super markets and retail chains offer their customers the option to have their products bagged in plastic or paper. While many customer still value plastic because of its durability, water-resistant nature and also the fact that it is

extremely reusable, paper bags are also wildly popular. One of the reasons why paper bags are popular is because of safety. Plastic bags have been responsible for many deaths especially for small children. This is because children are fond of playing with plastic bags and one of the ways in which they do this is to place the bags over their heads. In the event that the child is unable to free themselves fast enough, death by suffocation can occur. This is one major reason why shoppers prefer paper bags to plastic bags.

Another reason why shoppers prefer paper bags is because they are easily disposable. While plastic bags have obvious advantages, they tend to litter the house because most people reuse them. This can cause an environmental issue especially if there is wrong disposal. If disposed of wrongly especially in areas with farm animals, these animals can swallow these bags and suffer health repercussions. One major disposal issue that environmental proponents fight about in regards to plastic bags is the way recycling plants handle them. While recycling has been welcomed by many as a safe way of getting rid of plastics that have outlived their use, it has since been discovered that they are incinerated thereby releasing harmful toxins into the atmosphere.



Paper bags are light, safe and can be easily discarded after they are used. They therefore pose no threat to small children or to the environment. Although the chances of paper bags causing a fire exist, the chances are slim compared to dry grass during summer.

When children play with paper bags, they end up shredding them and therefore they pose no imminent threat. Paper bags are also extremely cost effective for the retailer and in most supermarkets; they are free with any purchase. This may not necessarily be the case with plastic bags where in countries such as Ireland, pose such an environmental hazard that an additional charge is passed on to shoppers who want to carry their grocery purchases using plastic bags.

Benefits Of The Paper Bag

“ The manufacturing process for a paper bag requires four times as much energy as the manufacturing process for a plastic bag. The production of paper bags creates 50 times more water pollutants than the production of plastic bags and 70 percent more air pollutants. Additionally, it requires 98 percent more energy to recycle paper bags than it does to recycle plastic bags, but the recycling rate for paper is higher. “

- 100% reusable, recyclable and biodegradable.
- Easier to carry than plastic bags.
- Holds more items than plastic bags = fewer bags to handle.
- Environmentally preferred.
- Contains 40% post-consumer recycled material.
- A renewable resource - comes from trees.
- High profit margin

Paper Bags Vs. Plastic Bags

1: Energy And Natural Resources

It takes more than four times as much energy to manufacture a paper bag as it does to

manufacture a plastic bag.

Energy To Produce Bag Originally (BTUs)

Safeway Plastic Bags: 594 BTUs

Safeway Paper Bags: 2511 BTUs

Of course, most paper comes from tree pulp, so the impact of paper bag production on forests is enormous. **In 1999, 14 million trees were cut to produce the 10 billion paper grocery bags used by Americans that year alone.** Paper bag production delivers a global warming double-whammy forests (major absorbers of greenhouse gases) have to be cut down, and then the subsequent manufacturing of bags produces greenhouse gases.

2: Pollution

The majority of kraft paper is made by heating wood chips under pressure at high temperatures in a chemical solution. As evidenced by the unmistakable stench commonly associated with paper mills, the use of these toxic chemicals contributes to both air pollution, such as acid rain, and water pollution. Millions of gallons of these chemicals pour into our waterways each year; the toxicity of the chemicals is long-term and settles into the sediments, working its way through the food chain. Further toxicity is generated as both plastic and paper bags degrade.

Pollutants Paper Vs. Plastic

Paper sacks generate 70% more air and 50 times more water pollutants than plastic bags.

3: Recycling

It takes 91% less energy to recycle a pound of plastic than it takes to recycle a pound of paper. But recycling rates of either type of disposable bag are extremely low, with only 10 to 15% of paper bags and 1 to 3% of plastic bags being recycled .

Energy To Recycle Package Once (BTUs)

Safeway Plastic Bags: 17 BTUs

Safeway Paper Bags: 1444 BTUs

Although paper bags have a higher recycling rate than plastic, each new paper grocery bag you use is made from mostly virgin pulp for better strength and elasticity.

4: Degradability

Current research demonstrates that paper in today's landfills does not degrade or break down at a substantially faster rate than plastic does. In fact, nothing completely degrades in modern landfills because of the lack of water, light, oxygen and other important

elements that are necessary for the degradation process to be completed. A paper bags takes up more space than a plastic bag in a landfill, but because paper is recycled at a higher rate, saving space in landfills is less of an issue.

With the advent of supermarkets and other retail chains in the world's major cities, there has been an increase in demand for paper bags and plastic bags. After all, these are indispensable in packing the items that the shopper has purchased. In most supermarkets, retail chains and grocery stores, there is choice to have your items bagged using plastic or paper. There are many retail outlets that still use plastic but in the United States, there is always the choice to use either. This has raised the question as to which is ideal, the plastic bag or the shopping bag. As we shall see, both have their pros and cons.

The plastic bag has been a top choice for many retailers for some time owing to the fact that it is strong and durable. This means that the plastic bag can bear considerable weight and rather than go home with a series of bags, the shopper can carry multiple items in one plastic bag and be assured that everything will be safe. While there are brands paper used to make the paper bag that are very durable and strong, there is always the danger that when using the paper bag, it might spill its contents if stretched too far.

The plastic bag is also water-resistant. This can come especially handy when buying groceries or items that might leak such as lotion. When it comes to the paper bag, there can be some concerns especially if you are carrying something that may tend to leak or was wet (fruits). Paper bags can soak water and become soggy thereby tearing and spilling their contents in a most unceremonial manner.

Paper bags, although popular, may not be reused too many times. This is not the case with plastic bags which can be reused around the house multiple times. This renders them extremely economical. Paper bags because of their overall lack of durability, cannot be used too many times and may only ensure for the duration of the original purpose for which they were issued.

Plastic bags have become an environmental issue. This is because they can be unsightly especially if disposed of the wrong way. In some instances, especially in farmland areas, cattle can swallow these plastic bags and this can become a health hazard for them. Both plastic bags and paper bags can also cause fires especially if disposed wrongly. In countries whose summers tend to get very hot, this can easily be an area of major concern.

Effects:

Reusable bags are an alternative to paper or plastic. Paper bags are made out of kraft paper. Kraft paper, in turn, is made by heating wood chips in a chemical solution at high temperatures. If you have ever driven by a paper mill, you have probably smelled the stench that emanates from it because of these chemicals. Not only are the chemicals harmful, the wood chips contribute to deforestation as well, since trees are cut down to produce these wood chips. In addition, the use of such chemicals has been proven to contribute to water pollution, air pollution and acid rain.

After the paper-making process is complete, the chemicals filter down into the waterways. The chemicals' toxicity settles into the waterways' sediments, where it can remain for a long time.

Misconceptions:

It is often thought that because paper bags are somewhat biodegradable, they must be safer than plastic bags. The reality is that paper bags take more energy to recycle than plastic bags do. Also, studies in landfills have shown that because of lack of light and moisture, paper doesn't break down any faster than today's plastic bags. In addition, recycling rates for both paper and plastic bags have been very low.

Potential:

While neither paper nor plastic bags are safe, there is an alternative to both. Reusable cloth bags are becoming increasingly popular at grocery and chain stores. They can be purchased for a small amount, usually \$1 per bag, and can be used repeatedly.

Paper bags remain an option in grocery stores and are preferred by many consumers for convenience; some people assume they are less damaging to the environment than plastic bags. The production of paper bags is, however, harmful to the environment in several ways.

Paper Bag Consumption:

Ten billion paper bags are used annually in the United States alone. It takes 14 million trees to meet this demand. Many consumers prefer paper bags because they hold more than plastic bags and are sturdier, but stores mostly prefer to give out plastic bags because they are cheaper than paper.

Paper Bag Production:

Paper bags are mostly made from virgin tree pulp because recycled pulp is not as strong, so their production inevitably begins with chopping down trees. Paper bag production is damaging to the environment in two ways: chopping down trees reduces the absorption of greenhouse gases, and the manufacture of the bags requires use of toxic chemicals that contribute to air and water pollution. Additionally, the transportation of paper bags, which are relatively bulky and heavy, requires the consumption of petroleum, a non-renewable fossil fuel that causes further air pollution.

Paper Bag Disposal:

A paper bag that ends up as litter will degrade in 10 months; however, in a landfill, it will not degrade for hundreds of years. Paper bags that are printed with vegetable-based dyes can be composted to provide a useful garden fertilizer. Paper bags can be reused as trash bags in the household and reused for groceries several times.

Paper Bag Recycling:

Less than 15 percent of paper bags in the India are recycled. Paper can only be recycled four to six times, and recycled paper is usually mixed with virgin tree pulp for strength, so recycled paper bags are rarely made from 100 percent recycled materials.

Paper Bag Use On The Rise:

In almost any country where there are retail stores, whether accessories, clothing, groceries or even gift shops, we will find shopping bags, both plastic and paper. Plastic bags have been very popular because they are durable, attractive and can be used later in a variety of ways even around the house. But paper bags have also been increasing in usage. While stores do offer the option for the customer to carry out their newly purchased merchandise using either plastic bags or paper bags. Plastic bags, while ideal, can pose a danger to small children. There have been numerous documented cases of death cases by suffocation when a child (and even adults in some cases) have pulled a plastic bag over their heads by accident and have been unable to free themselves in time. With that in mind, families who have small children tend to avoid plastic bags when shopping and opt instead to go for paper bags. Paper bags have been hailed as being very cost effective for both the consumer and the retailer. This is because for the consumer, they are free with each purchase. On the other hand for the retailer, purchasing paper bags is cheap because they take advantage of economies of scale (by buying in bulk). There are different types of paper bags for shopping. There are those that are single-use and those that are recyclable. Many homes are now trying to avoid trash and so tend to

lean more towards recyclable paper bags. These are usually very durable in comparison to other bags of their class and can endure a weight that is much more than their actual weight. Recyclable paper bags can also be used again and again.

In many parts of the United States, there are recycling centers where people can throw their single-use paper bags for recycling. This greatly saves the environment and can even reduce fires especially in the summer. By using authorized recycling center for paper bags rather than attempting to dispose of the bags themselves which is a common cause of many summer fires, the environment is preserved.

Conclusion-

There are many paper bag manufacturers in the world. Many of these are also the same plants that produce other paper products. Environmentalists sometimes contend that the use of paper bags contributes to the destruction of the world's forests and by extension the environment. While there may be some truth to the fact that paper products have accelerated the rate at which trees are cut down, the use of paper bags has not necessarily resulted in more trees being exterminated. This is because in every paper factory, there are waste products that are not actually used for the end product. These waste products are the ones that are recycled to produce paper bags. Environmentalists should therefore rest in the knowledge that paper bags are safe environmentally. While competition from plastic bags is stiff and a reality to face, paper bags are not going anywhere and are still a top choice for many shoppers.

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