

Paper vs. Plastic vs. Bagasse vs. Permanent Dishes with new more efficient dishwasher(s)

What are the environmental and societal costs of any of these products? They all have negative effects. Probably the most environmental solution would be to eat like many societies in the world where you sit on the ground surrounding a large bowl of food and dig in using your fingers or a leaf. Somehow, I just can't see us doing that, so we have to come up with solutions that work for our population and location.

To directly confront the questions and problems, it is easiest to look at the problem from a cost point of view. All four of our options above have environmental and societal costs. It is very hard to put the environmental and societal cost into dollar and cents. You can go to websites and the results will not be exactly the same. However, all four options cause and/or release pollution, toxicity, exploitation of natural resources, weak or non-existent labor standards, exploitation of workers. Ideally the market costs of all products should include these costs, but they don't.

EXAMPLES:

- Pollution and toxicity caused in extraction, mining or growing, and transportation of the raw materials (e.g. land, air, and water pollution)
- Impact on communities and people on the extraction of these resources (e.g. cutting down of rainforests, or destroying indigenous communities to extract oil and build pipelines or mine for minerals)
- Toxicity and pollution caused in the manufacture of the product itself
- Exploitation of workers for production of raw materials and/or the product
- Distorting subsidies which permit exploitation of raw resources, which would not be possible without the taxes paid for by the taxpayer.

(info from World Centric.com)

On the positive side of plastic, paper and Bagasse products, they are disposable, making clean up easy and quick.

Some of the negatives for each alternative:

REGULAR PLASTIC PLATES AND CUTLERY: What is wrong with this alternative? Besides the costs listed above in bullets, they are non-biodegradable, petroleum based, and stay in the environment for hundred to thousands of years. Supposedly, 40 billion plastic utensils are used every year in the USA, together with 150 billion Styrofoam and plastic cups and plates. In our area, the garbage goes to Charles Point to be incinerated, where plastic products release Dioxin into the air for us to breathe.

VIRGIN PAPER PLATES: Many of us assume, that left over tree parts, after the good parts are made into lumber, are used to make paper products. Not necessarily so. For

some, the whole tree is cut down, chipped and sent off to make paper. Trees are valuable resources: capturing CO₂; creating oxygen; holding back water in the soil, to be released slowly, thus reducing flood damage; providing shade and thus lowering temperatures by up to 10 degrees, thus reducing energy costs; and providing wildlife habitat. When rain storms cross over a mountain blowing from the West, the trees in forests actually increase the likelihood that rain will fall in the areas with trees. Deforestation many times leads to desert like conditions. Trees in my mind should not be wasted on paper plates which we use once and throw away.

RECYCLED PAPER PLATES: There are many different kinds of recycled products. Some are just using the sawdust from logging operations to make plates, but some are truly recycling the paper waste we put out to the curb or our offices send off to be recycled. It is important to read the label carefully. You need to look for a statement regarding at least 30% post consumer product content. In addition recycled paper products are less polluting in the manufacturing process. They use more benign chemicals to whiten the fiber and they are using a resource that does not require destroying an environment.

BIODEGRADABLE “PLASTIC”: There are various sources for these disposable, but biodegradable products. They are the new generation of products using starch (from corn, potato, tapioca, ect.), cellulose, soy protein, lactic acid. They are not hazardous in production and break down to CO₂, water and biomass in the environment when discarded. They seem to vary in their resistance to heat (like for hot drinks and microwaving), and time to biodegrade, degrade or compost. The best choice is compostable, because it degrades when composted in the ground providing material that supports plant growth, and leaves no toxic material. Bagasse plates and cutlery made from sugar cane pulp fiber fulfills the compostable requirement.

PRICE COMPARISON FROM WORLD CENTRIC WEBSITE: these costs can vary depending on where you buy the plates, but this information helps you see that being green does not necessarily mean more expensive.

| | <u>Sweatheart paper</u> | <u>Chinet Paper</u> | <u>Bagasse</u> |
|------------------------------------------|-------------------------|---------------------|----------------|
| 9” plate, 500 count | \$49 | \$62 | \$38 |
| 6” plate, 1000 count | \$46 | | \$35 |
| 7” plate, 1000 count | | \$91 | \$49 |
| 10” plate, 500 count (3-compartments) | | \$80 | \$46 |

PERMANENT DISHES THAT YOU PUT INTO A DISHWASHER:

These permanent dishes could be plastic or ceramic. There are environmental costs with either choice. Plastic does not break and tends to scratch with wear, ceramic breaks and chips. However, the costs, monetary and otherwise, are for one time, since both are reusable over and over. Some plates like Corning Corelle are very durable.

Our current Fellowship dishwasher is a disaster. It does not clean well and is very energy inefficient. Replacing a 1994 dishwasher with a current energy efficient model

would save \$25 in yearly energy cost (probably more in our high cost area) and 1,000 gallons of water. Using a fully-loaded-newer model dishwasher that does not require pre-rinsing, uses 35% less water than hand washing. (Ecocycle.org). Getting an industrial dishwasher, would cut down on wash time, making clean up time quicker.