

Paper Towels and Napkins: Environmental friend or foe?

By Susan Erickson

For some time now I have been considering switching away from paper napkins and paper towels to re-useable cloth versions. As I researched the potential benefits for making the switch, I found some surprising facts. According to Wikipedia.com, paper towels were introduced in 1907 by the Scott Paper Company in order to help prevent the spread of colds from cloth towels in restrooms. In addition, 2/3 of North American paper towel consumption is in the home market. The growth in away-from-home paper towel usage has been reduced by a switch from folded towels to roll towel dispensers. In the US, we use a lot of paper tissue product—24 kg per person per year. This is 50% higher than the average use in Europe.

A research study cited in The Guardian compared the seven most common drying methods in public restrooms and concluded that paper towels and warm air hand dryers have the highest environmental toll, and that the best alternative is the cold air-driven hand dryer from Dyson manufacturing—(Dyson also commissioned the research study). The study also found that the environmental impact of recycled towels equals that of virgin paper towels in a number of environmental measures, including CO2 emissions and water consumption. Recycled and virgin towels were both found to generate over three times more carbon emissions than the Dyson Airblade hand dryers, creating waste, consuming more energy, and also using more water. <http://www.theguardian.com/environment/2011/nov/11/paper-towels-drying-hands-energy> .

Writers at this blogsite <http://www.thekitchn.com/why-being-paper-towel-free-in-87955> did a lot of research and thoughtful analysis on the topic. They cited these arguments against using paper towels at home:

- factories causing pollution from their production and trucks to transport them.
- claimed to kill "virgin" trees and is depleting the worlds resources one roll at a time.
- Bring unwanted chemicals into our homes from the processes in which they are made.
- don't recycle well. (The pulp is so broken down after use they cling to other recyclables, making them impossible to sort out later.)
- no real reason for them when you have towels and sponges.
- Americans are lazy and we lived without them for years, who need convenience, my Grandparents sure didn't!

That being said, these authors do use paper towels occasionally, when they are the best tool for the job at hand, particularly those tasks involving grease, fat, or slimy things—mostly coming out of the wrong end of a small child or the family pet! Their position is that occasional use of a

paper product as a convenience is not a bad thing, and that the trees involved in making paper towels are grown as a crop, and this is not the same as cutting down virgin forest.

There were still a few factors left to consider however. At this site someone from California cited water resource issues, and wondered if it's better to use paper products so you don't use precious water in laundering cloth versions. <http://scienceline.ucsb.edu/getkey.php?key=1966> The scientist who answered the question said..."it's complicated". The paper industry involves a lot of chemicals and water usage...but cotton production is also environmentally costly. Their conclusion was *"So basically, it depends. It takes slightly less energy to wash and dry cloth napkins than to make paper napkins, but there are other factors to consider besides energy. Instead, it's probably better to think of ways to reduce our use of any kind of napkins or towels (by not taking more than we need, etc.)"*

The best research, however, was in a link from the previous question. The triple pundit blog is a new favorite for me, in addressing the triple bottom line of sustainability—people, planet, and profit. I found lots of helpful information here on a variety of topics.

<http://www.triplepundit.com/2007/06/askpablo-napkins/> These folks had done heavy-duty calculations for both water usage and carbon emissions for both cloth and paper products.

Here's their analysis:

So, here's the final tally: Fifty paper napkins are responsible for 3,750 g of water use, and 462.5 g of CO2 emissions (although we can't assume the landfill emissions factor to be quite accurate) and the cloth napkin is responsible for 240,548 g of water use, and 648 g of CO2 emissions.

Now I needed to apply this information to my own life. In the calculations above, the detriment to using cloth napkins related to (1) purchasing new cotton cloth, and (2) washing them in an extra load of laundry. I believe I can re-purpose old kitchen towels, sheets, and other cotton fabrics for use as towels, napkins, and cleaning rags. If I wash them as an add-on to a not-quite-full load of laundry, I believe there will be a net environmental benefit.

I learned two additional valuable things from this exercise. One is that I need to remember how very harmful cotton farming is, and to try to find organic cotton clothing—or even better, try harder to purchase used clothing. The second is that the triple pundit website is a great place for me to go with sustainability questions.