

# Emerging research develops edible food packaging

By Leah Dobkin

The emperor is not wearing environmentally sustainable clothes and many organic and natural foods companies may not package their products in a sustainable fashion either. It's time for more natural and organic food companies to expand their focus beyond the content and processing to the materials and design of their packaging.

There are many strategies to make packaging "greener." Packaging can be reusable even before it is recyclable. It can also be lighter to reduce transportation costs including fuel consumption. But perhaps most intriguing is when packaging can be not only biodegradable, but even edible.

Dr. Tara McHugh, who is with the Albany, California Agricultural Research Service of the U.S. Department of Agriculture has developed an edible food wrap which looks like paper, but it's made from concentrated fruit or vegetable puree such as apple, mango, broccoli and tomato. The wrap keeps a sandwich fresher longer and provides added health benefits such as vitamins, minerals and antioxidants.

Each wrap is equal to one fruit or vegetable serving.

The wraps are biodegradable and an alternative to plastic wrap and aluminum foil.

McHugh says the wraps can also be used as a sauce for cooking. Perhaps the most amazing attribute of these wraps is their antimicrobial properties. This is accomplished by infusing spices like oregano and cinnamon into the wrap, preventing

food borne pathogens. The oils from these herbs are the latest arsenal to fight against E Coli and Salmonella and other nasty bacteria. McHugh is working on an edible straw too. These products are not currently commercially available. Natural and organic food producers may find the task of sustainable packaging to be too challenging. However, alternative packaging such as Mc Hugh's food sheets may make it easier someday