ADVENTURES IN LIFELONG LEARNING University of Wisconsin – Parkside, 900 Wood Road, Box 2000, Kenosha WI 53141-2000 262 595-279



The Demise of Plastic Recycling? Conversion to Bio-Materials? New Sustainability Initiatives in Packaging & Consumer Companies?

Where Are We In All This Disruption and Change? Wednesday, November 14, 2018

1 – 3 PM, Talent Hall, Room 182

As of 2016, China had been importing two-thirds of the world's recycled plastic waste, but those imports screeched to a halt with their government's implementation of a "Green Wall" policy and they now refuse to take recycled plastic waste that has not been carefully cleaned and sorted. Despite China's growing use of plastic, this drastic cut in imports of recycled plastic feedstocks has plunged the recycling industry into complete turmoil.

In this timely class, plastics expert and ALL member, Jeff Timm, will update us on the drastic changes that have taken place since his last presentation about plastics recycling in 2015. In this class, Jeff will give us an overview of the critical market factors that are affecting the recycling and plastic packaging industries today. Jeff will also review the increasing constraints on petro-based hydrocarbon feedstocks and examine the potential for switching to biomaterials, a beneficial change but one that would require a substantial shift in government policies, as well as increased participation from industries and consumers in recycling and product design efforts. Additionally, key initiatives from major consumer product companies are having an impact in some consumer product segments and will be discussed. And, yes, we'll look at the huge "island" of plastic waste floating in the Pacific.

If you have questions, please call Merrilee Unrath at 262-694-7424 or email: mleeu@wi.rr.com

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Plastics Recycling Disruption	Members: \$5	Guests \$10	Register by Friday, Nov 1st, 2018
Name			Check #
Email		_ Home phone	
Emergency contact name & phone			

Deliver **cash** registrations to the ALL office in Tallent Hall. Make **checks** payable to UW Parkside/ALL; deliver or mail to Vanessa. **Credit card** registration for members <u>must be</u> submitted online; an email with a member registration **LINK** will be sent around the 1st Monday each month. NO online credit card registrations can be accepted for guests. As registrations fill, members get preference signing up. **Note**: there is now \$5 cancellation fee if you are unable to attend or need to request a refund.



Our Presenter, Jeff Timm

Jeff is a graduate of the University of Massachusetts and a retired independent consultant and former Business Development Executive with diverse experience with Fortune 100 companies — Dupont, Avery Dennison, and Johnson Polymer — as well as in growing global markets, both domestically and in Asia, for B2B (business-to-business) sales and marketing in the plastics, bioplastics, and adhesives

industries. Jeff previously contributed to a monthly packaging blog on www.adhesives.org (the Adhesive & Sealant Council) and has been a frequent contributor to packaging trade journals including *Packaging Digest.*

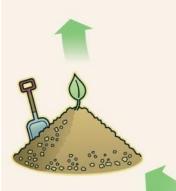
In addition to enjoying many of ALL's activities with Penny, his lovely wife, Jeff has been enjoying his "summer job" as an usher at Miller Park for the Milwaukee Brewers baseball team since 2011.





Raw Materials

The process typically starts with growing plants such as sugar cane, corn and potatoes that are high in starches, the raw materials that replace petroleum products in bioplastics.



Compost and Renewal The organic waste will compost and return to the earth as mulch to help new crops grow, completing the cycle.

Sources: CTC Clean Tech Consulting GmbH; WSJ reporting



Extraction The plant materials are harvested and processed to extract their starches.

The Life Cycle of Bioplastics

Some bioplastics decompose in a fairly short period of time, and the full life cycle of such products is shown here. Other bioplastics aren't biodegradable. But even in those cases, the use of plant-based raw materials means that pollution is being removed from the atmosphere while the plants grow, giving bioplastics a green appeal.

Disposal

When disposing of a bioplastic product that is fully biodegradable, consumers can place it in an organic-waste collection bin.





Refining

The starches are processed further in bio-refineries through the use of special enzymes or fermentation (much as biofuels are made) to produce the chemical compounds that react to make plastics. The compounds can be refined to fit the specifications manufacturers need for different products.



Manufacturing

Bioplastics manufacturers use pellets or granules of the compounds to make utensils, plates, cup linings, carpeting and other products.