FOOD PACKAGING & PFAS

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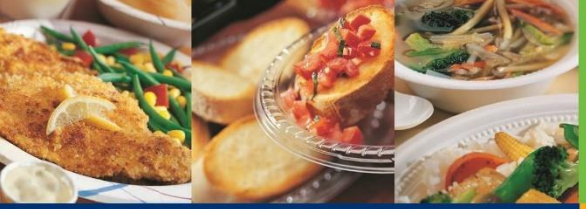
FOODSERVICE PACKAGING INSTITUTE®

Foodservice Packaging
The Sensible Solution®

Lynn Dyer
2019 IMFA Seminar
March 8, 2019



ABOUT FPI

- Established in 1933
- Only industry trade association in North America solely focused on all single-use foodservice packaging products
  - Used by foodservice establishments for prepared foods and beverages
- Members include:
  - Converters and their raw material and machinery suppliers (approximately 90% of the industry);
  - Foodservice distributors and operators

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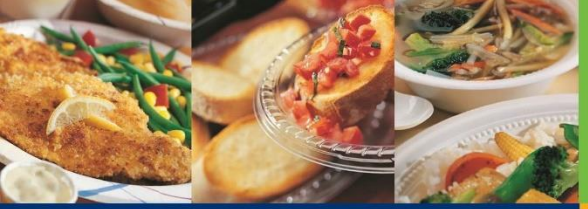
PFAS 101



FOOD PACKAGING & PFAS

WHAT ARE PFAS?

- PFAS = Per- and Polyfluoroalkyl Substances
- Class of over 3,000 chemicals containing at least one fully fluorinated carbon atom, all with very different properties in different applications

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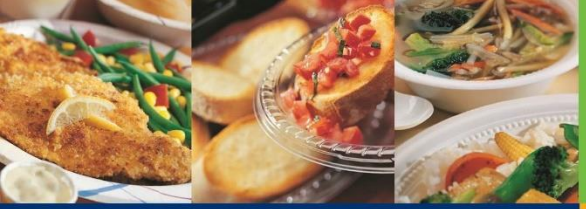

FOOD PACKAGING & PFAS

PFAS APPLICATIONS

- Non-stick cookware and small appliances
- Repeat-use food contact applications (e.g. tubing and hoses in soda and ice cream dispensers)
- Components of food processing equipment (e.g. gaskets, sealants and filters)
- Food wrappers
- Paper/molded fiber service ware and take-out food containers
- Food boxes (e.g., pizza boxes)
- Microwavable bags (e.g., popcorn)
- Pet food containers

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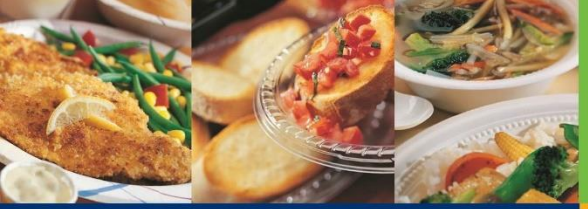
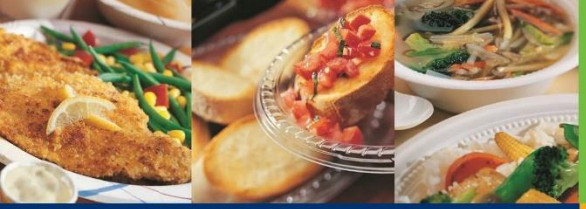


PFAS IN FOODSERVICE PACKAGING

- Purpose: Prevents oil and grease from seeping through food packaging materials and onto clothing, skin, furniture, car interiors , etc.



SUB CATEGORIES OF PFAS USED IN FSP

- "Long chain" or "C8" chemicals, since they have 8 or more carbons in their structure
  - Perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS) are two examples
    - These were NEVER used in food packaging
  - These were voluntarily phased out and are no longer allowed in the U.S. and Canada, but still allowed in other countries

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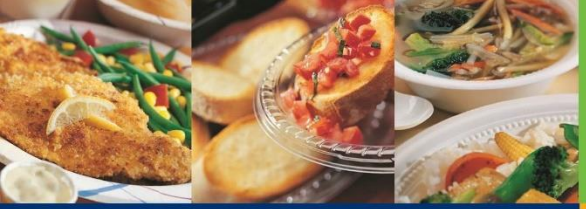
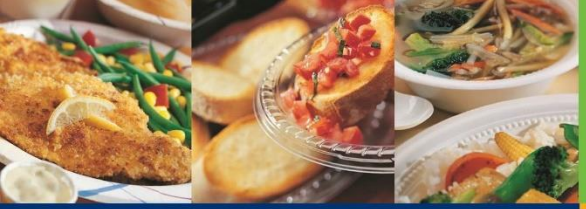


SUB CATEGORIES OF PFAS USED IN FSP

- "Short chain" or "C6" chemicals, since they have 6 or less carbons in their structure
  - Manufacturers of these newer chemicals submit their specific formulations to regulatory agencies for rigorous review and, if found to be safe for their intended use, may be used
  - Are approved by FDA and Health Canada, plus many other regulatory agencies around

THE NGO MOVEMENT



FOOD PACKAGING & PFAS

NGOS FOCUS ON FOOD PACKAGING

Collaborative Network
For a Cancer Free Economy

Purchasing Safer Compostable Food Service Ware

HOW TO AVOID FLUORINATED CHEMICALS

Toxic Wrappers: The Unappetizing Truth About Fast Food Packaging

SILENT SPRING INSTITUTE
Researching the Environment and Women's Health

What are highly fluorinated

Highly fluorinated chemicals,
in a wide range of consumer p
waxes, nonstick cookware, gr
chemicals from direct contact

TOXIC-FREE FUTURE
SCIENCE • ADVOCACY • RESULTS

CLEAN PRODUCTION ACTION

ALTERNATIVES TO PFAS-COATED FOOD PACKAGING

Avoiding Hidden Hazards
A Purchaser's Guide to Safer Foodware

CEH CENTER for ENVIRONMENTAL HEALTH

ENVIRONMENTAL HEALTH STRATEGY CENTER

Mind the Store

Safer Chemicals Healthy Families

TOXIC-FREE FUTURE
SCIENCE • ADVOCACY • RESULTS

June 27, 2018

Re: Toxic Chemicals in Food from Processing, Packaging, and Preparation

We represent millions of American consumers who share the growing scientific concern about food safety and chemical hazards. Increasingly, toxic industrial chemicals such as *ortho*-phthalates and per- and polyfluoroalkyl substances (PFAS) used in food processing, packaging, and preparation are being found in America's favorite brands of food products. Unfortunately, the U.S. Food and Drug Administration (FDA) lacks the mandate, budget, and political will to modernize our broken chemical safety system to protect the health of your customers, especially pregnant women and children.

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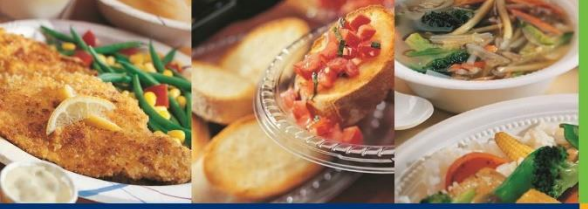

FALLACIES IN THE NGO CAMPAIGNS

- Treating all PFAS chemicals the same
  - No distinction between PFAS not used in food packaging (like PFOA and PFOS) to PFAS used today in food packaging
- Questioning the validity of the FDA approval process, which is one of the most stringent in the world

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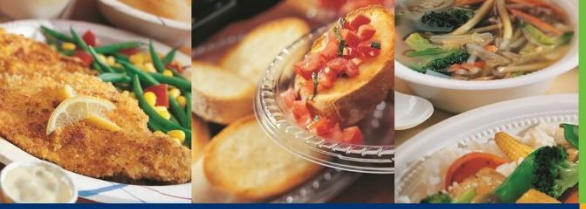

FPI'S ACTIONS TO NGO CAMPAIGNS

- Following reports in 2017 and 2018:
  - Coordinated with FluoroCouncil
  - Developed one-pager on PFAS (found on www.fpi.org); updated in 2018
  - Provided many media interviews, including appearance on Dr. Oz
  - Met with NGOs and other stakeholders at in-person meetings in 2017 and again in 2018

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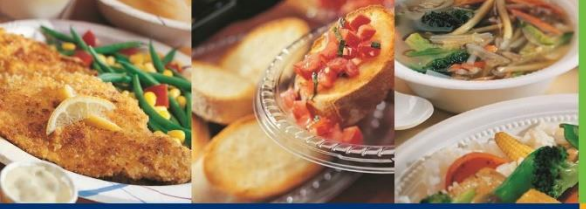
LEGISLATIVE AND REGULATORY ACTIVITY



LEGISLATIVE & REGULATORY ACTIVITY

- At the Federal Level
  - U.S.:
    - EPA just released PFAS Action Plan, focused more on limits in drinking water and groundwater cleanup
    - FDA began reviewing C6; in April 2018, indicated they would be conducting own testing and agreed to share testing protocols with industry for feedback
    - Increased activity in Congress, mainly around PFAS in drinking water

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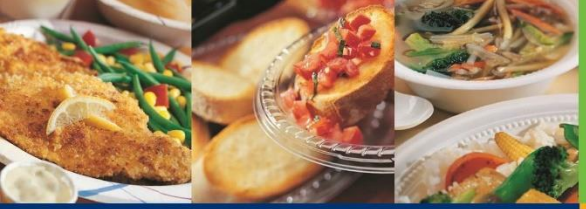
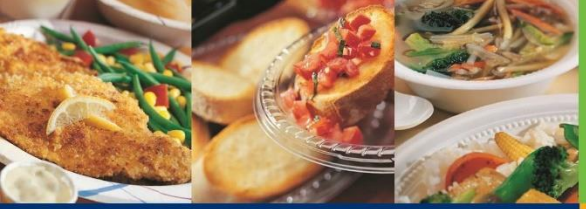


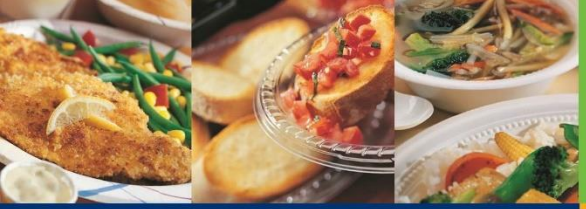
LEGISLATIVE & REGULATORY ACTIVITY

- At the Federal Level
  - Canada:
    - Health Canada has released Canadian Drinking Water Guidelines for PFOS and PFOA, but not for other PFAS
    - Also, no guidelines available for PFAS in soil



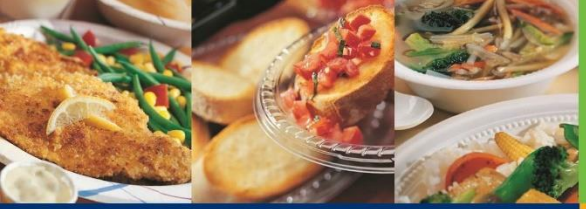
LEGISLATIVE & REGULATORY ACTIVITY

- At the State/Provincial Level
  - Washington:
    - Passed law requiring alternatives assessment for PFAS in food packaging by 2020, followed by ban if alternatives identified starting in 2022
    - Developing Chemical Action Plan for all PFAS (draft to be published in May/June 2019)



LEGISLATIVE & REGULATORY ACTIVITY

- At the State/Provincial Level (con't)
  - California:
    - Bill requiring labeling of food packaging containing PFAS not approved in 2018
    - Interest from Department of Toxic Substances Control
    - Prop 65 listing of PFOA/PFOS – November 10, 2018 warning requirements
      - No threshold identified yet



LEGISLATIVE & REGULATORY ACTIVITY

- At the State/Provincial Level (con't)
  - Minnesota and New York:
    - Approved state purchasing specifications that prohibit FSP with intentionally-added PFAS
  - Bills introduced in CA, CT, IA, MA, ME, NJ, NY, RI, VT, WA
  - Nothing in Canada (so far)

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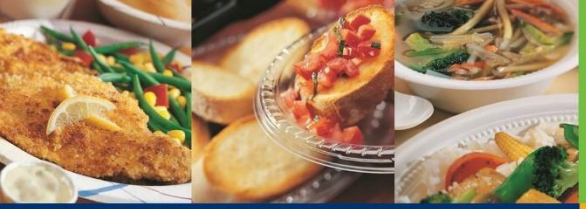

LEGISLATIVE & REGULATORY ACTIVITY

- At the Local Level
  - Bans on PFAS-containing compostable FSP starting January 1, 2020 in:
    - San Francisco, CA
    - Berkeley, CA
  - Nothing in Canada (yet)

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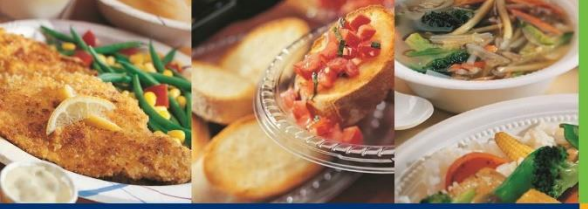
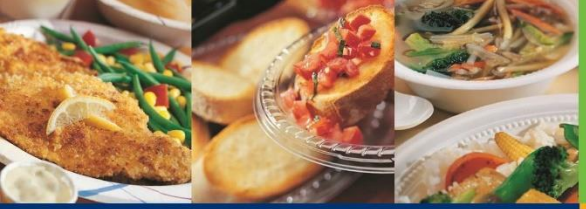
PFAS AND COMPOSTING



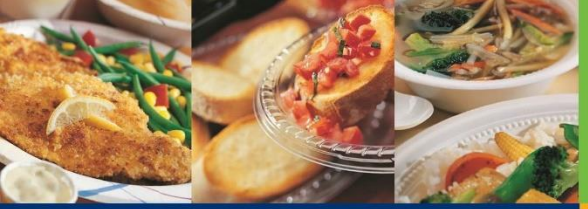
PFAS AND COMPOSTING

- Biodegradable Products Institute
  - Effective January 1, 2020, BPI will not certify products, and products may not be marketed as “BPI Certified,” that contain over 100 ppm total fluorine
  - Option is to not get BPI certification, BUT…



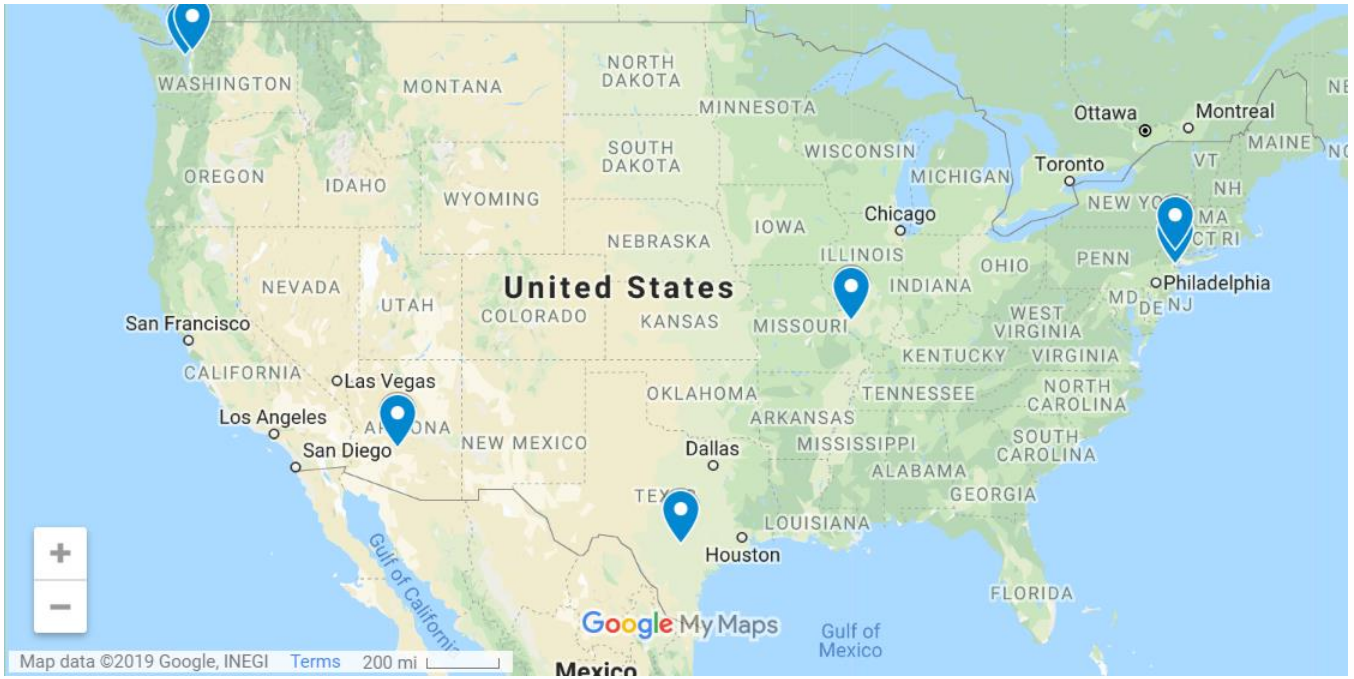
PFAS AND COMPOSTING

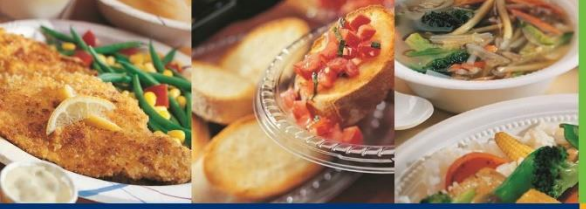
- Compost Manufacturing Alliance
  - Effective January 1, 2020, CMA facilities will not accept products for field testing or substrate review that contain over 100 ppm total fluorine
  - CMA facilities represent roughly one quarter to a third of all composters in the U.S. that accept compostable FSP



PFAS AND COMPOSTING

- CMA Facilities





MEMBER MEETING ON PFAS ISSUES

PFAS AND COMPOSTING

Why We Don't Want Compostable Packaging and Serviceware

Every year, the Pacific Northwest's compost industry turns hundreds of thousands of tons of yard and food wastes into nutrient-rich compost for agriculture, nurseries, landscaping businesses and home gardens.The quality compost products that we create develop healthier and more resilient soil, reduce greenhouse gas emissions, recycle nutrients, conserve water, and may reduce the use of synthetic fertilizers, pesticides and herbicides.

"Compostable" packaging and serviceware items have been on the rise for the past decade and they are increasingly ending up in our facilities. These materials compromise our composting programs and limit many of the environmental benefits of successful composting.

Here are nine reasons why we don't want "compostable" packaging or serviceware delivered to our facilities:

1 **They don't always compost:** Not all 'certified' compostable items will actually compost (break down) as fully or quickly as we need them to. This is because certification standards test compostability based on laboratory conditions. Those conditions are not always replicated in the real world (our facilities) which means that some "compostable" items don't fully compost. The result is a finished compost that is contaminated with bits of partially degraded "compostable" material.

2 **Contamination happens:** As a consumer, you may sort properly – but your neighbor might not. When collection programs accept compostable products, non-compostable look-alike items inevitably end up in the mix. These materials then must be removed, either at the start (when we receive them) or at the end (as pieces of garbage mixed in with finished compost). Either way, this contamination increases our operating costs and degrades the quality of our product, which makes the compost industry less economically viable.

3 **They hurt resale quality:** We don't want to produce finished compost that is contaminated with fragments of packaging and serviceware, and our consumers won't purchase contaminated material. Contamination lowers the value of our product, making it difficult and sometimes impossible to sell. When fewer people use compost, its environmental benefits aren't realized.

4 **We can't sell to organic farmers:** Farmers often use compost in the production of certified organic foods. National standards prohibit the use of many different packaging materials when making compost used to grow crops certified as "USDA Organic". Accepting packaging and serviceware at our facilities hinders our ability to provide finished compost to organic farmers.

5 **They may threaten human and environmental health:** Compostable packaging can contain chemicals that can transfer into finished compost. For example, some paper items have commonly been treated with a class of chemicals called perfluorinated alkyl substances (PFAS) to provide water and grease resistance. PFAS is persistent in the environment, can transfer from compost to ground and surface waters, can be taken up by plants from compost, and may have negative health impacts – affecting child development, reducing fertility, disrupting hormones, affecting the immune system, and increasing risks of cancer. While PFAS is being voluntarily phased out by some producers, it has not been outlawed, and may continue to be used in products that end up at our facilities. Separately, non-degraded fragments of plastic packaging can contaminate finished compost, intensifying environmental health concerns when it is used by buyers. We want to keep our compost clean and safe for all.

6 **It increases our costs and makes our job harder:** Some of us have accepted compostable packaging in the past, and found that loads of compostable packaging require us to change our processes, adding water, using more energy and spending additional resources to produce finished compost. Some types of compostable packaging mostly degrade into carbon dioxide and water and leave behind little of value for all of the extra effort required.

7 **Just because something is compostable doesn't mean it's better for the environment.** Oregon DEQ has found that compostable serviceware often has a larger (life time) environmental footprint than non-compostable items*. For example, compostable materials may require more fossil energy use, release more greenhouse gases, or result in more ecological toxins than their non-compostable counterparts, mostly due to how they're made. The research confirms what scientists already know: that *what materials are made of, and how they're made, may be more significant than whether they're composted vs. landfilled.* "Composting" and "compostable" are not the same idea. Composting is a beneficial treatment option for organic wastes, but "compostable" is not a guarantee of low impact.

8 **In some cases, the benefits of recycling surpass those of composting.** Some items, like paper bags, can be either composted or recycled. Generally speaking, the recycling of manufactured materials (such as packaging) back into new products or packaging can provide greater overall environmental benefits than composting does.

9 **Good intentions aren't being realized.** Compostable items often cost more – sometimes up to five times as much as non-compostable alternatives. That's a lot of money spent on products that might not actually help the environment – money that could be spent in more productive and beneficial ways.

Not only do compostable products often cost more to purchase, they also drive up the costs to operate our facilities and impede our ability to sell finished compost. Compostable packaging is promoted as a means of achieving "zero waste" goals but it burdens composters (and recyclers) with materials that harm our ability to efficiently process recovered materials. Reusable dishware is almost always a better choice for the environment. If you must use single-use items, please don't put them in your compost bin.

We need to focus on recycling organic wastes, such as food and yard trimmings, into high-quality compost products that can be used with confidence to restore soils and conserve resources. Compostable packaging doesn't help us to achieve these goals. We need clean feedstocks in order to produce quality compost.

Please help us protect the environment and create high quality compost products by keeping "compostable" packaging and serviceware out of the compost bin.

Thanks for your cooperation!

REXIUS COMPOST & ORGANICS · Dirt Hugger · Recology ORGANICS OREGON · REPUBLIC SERVICES Pacific Region Compost · LANE FOREST PRODUCTS The company to grow with · Compost Facility · ROGUE COMPOST · WASTE PRO

*See https://www.oregon.gov/deq/FilterDocs/compostable.pdf

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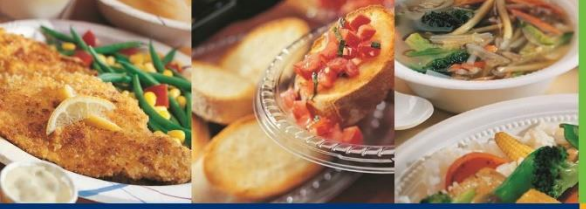
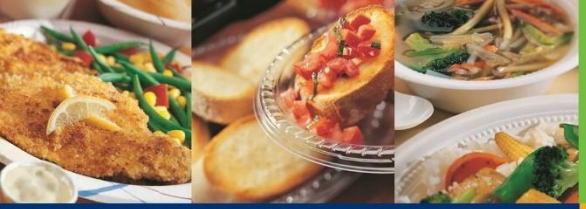


PFAS AND COMPOSTING

- A few comments on testing…
  - There is no one defined test method
  - The presence of fluorine does not mean the presence of PFAS, and certainly doesn't show type of PFAS
  - 100 ppm is in line with European standards, and some stakeholders seem to be in agreement with this threshold for "intentionally added"

PFAS ALTERNATIVES



PFAS ALTERNATIVES

- Replace with other materials
  - Rigid plastic
  - Other non-PFAS containing paper
  - Aluminum foil
- Apply [compostable] coating
  - PLA
  - Other?
- Non-PFAS wet end additive for pulp
- Reusables

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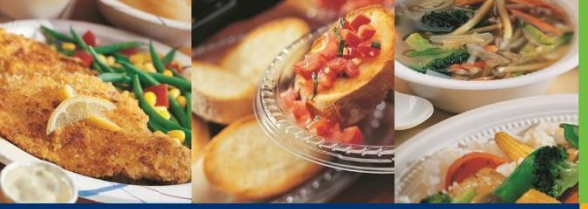

QUESTIONS?

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