



*Organic Food Meets Organic Pollutants: The Legal,  
Economic, and Policy Implications of PFAS-  
Contaminated Organic Food*

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# AGENDA



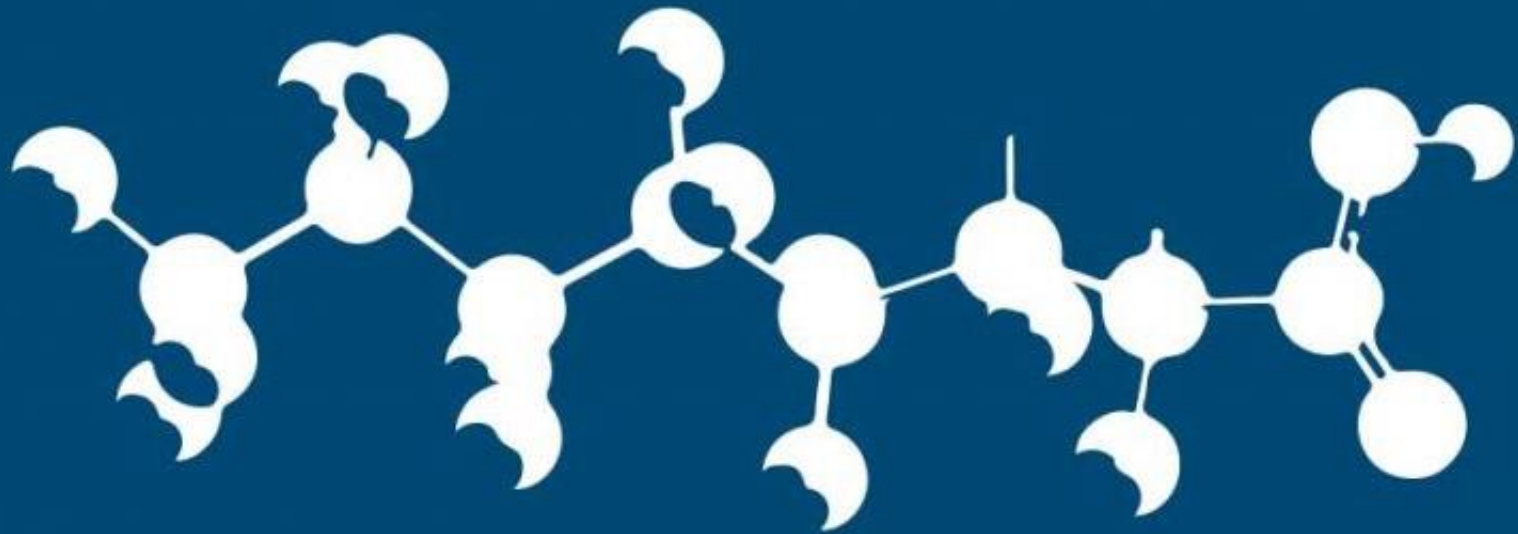
1. The Ecological Problem

2. The Regulatory Framework

3. The Road Ahead



# **THE ECOLOGICAL PROBLEM**



**P F A S**

## What are PFAS?

- A class of thousands of different chemicals
- Also called “forever chemicals”
- Originally used in heavy industrial setting

# Why am I hearing so much about PFAS these days?



\* Detrimental health effects

\* Widespread contamination

# Established PFAS Health Impact

Source: European Environment Agency

— High certainty

- - - Lower certainty

**Developmental effects  
affecting the unborn child**

Delayed mammary gland development

Reduced response to vaccines

Lower birth weight

Obesity

Early puberty onset

Increased miscarriage risk  
(i.e. pregnancy loss)

Low sperm count and mobility

Thyroid disease

Increased cholesterol levels

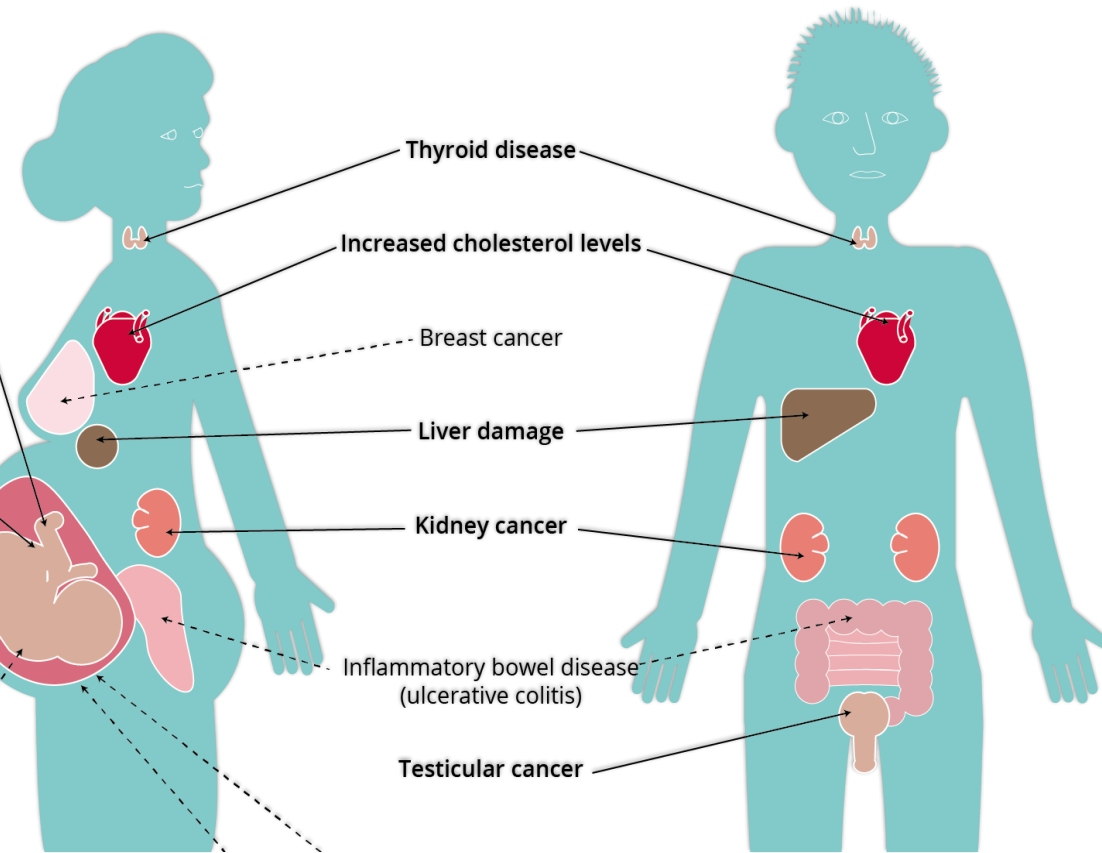
Breast cancer

Liver damage

Kidney cancer

Inflammatory bowel disease  
(ulcerative colitis)

Testicular cancer



# PFAS:

## Widespread PFAS presence

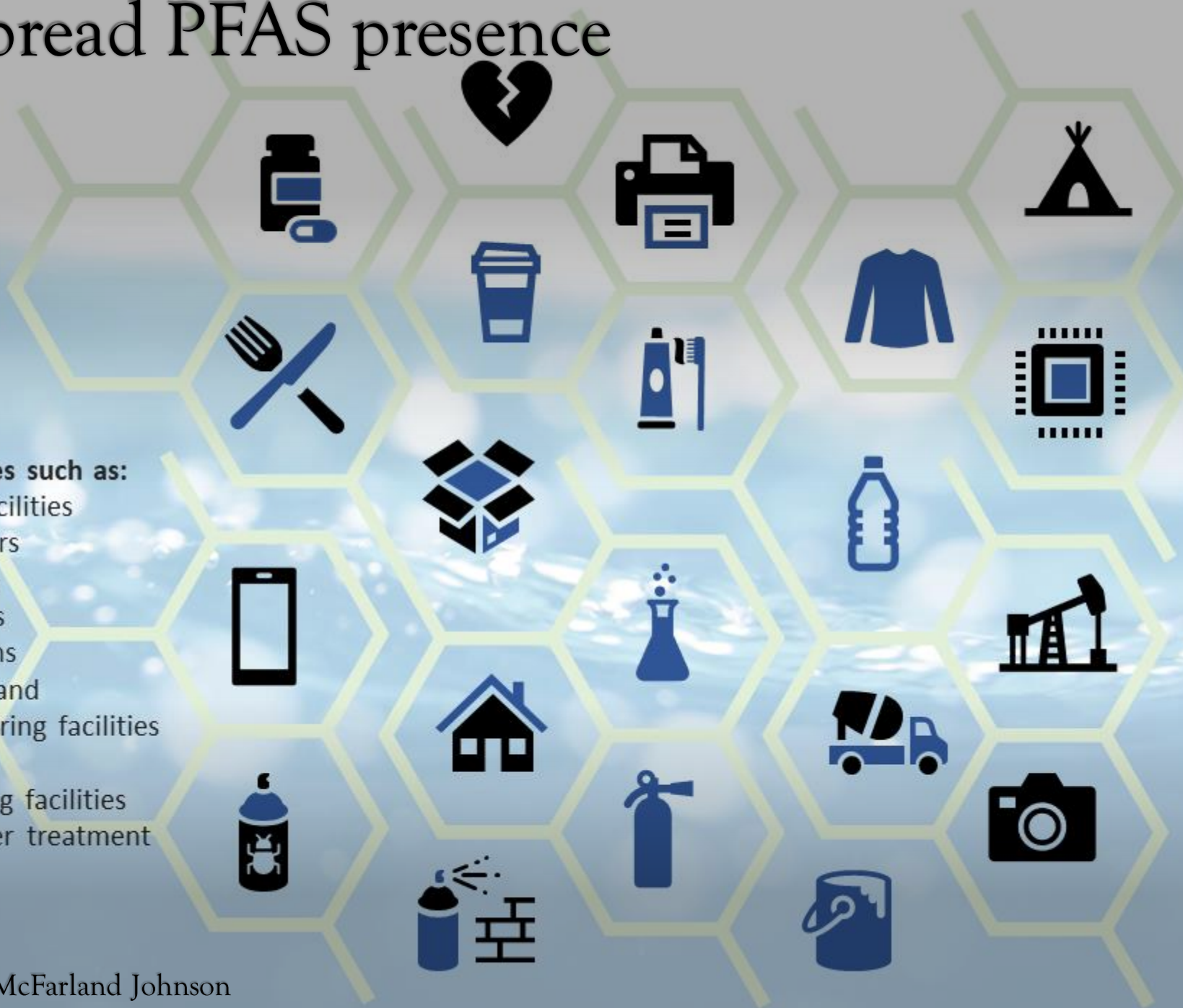
Not just found at airports. They are a large class of substances that are used to make consumer and commercial products. Be aware of surrounding property use and other sources of PFAS.

### Products such as:

- Non-Stick Cookware
- Waterproof and Breathable Clothing
- Cleaning Products
- Pesticides
- Paint
- Sealants & Adhesives
- Lubricants
- Paper & Packaging
- Construction & Building Supplies
- Cement Additives
- Oil & Gas Drilling

### Other sources such as:

- Military facilities
- Dry cleaners
- Boat yards
- Car washes
- Gas stations
- Industrial and manufacturing facilities
- Landfills
- Composting facilities
- Wastewater treatment facilities



Source: McFarland Johnson



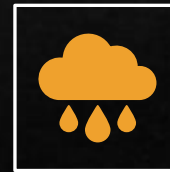
# PFAS in the environment



Air emissions



Particle  
transmission



Rain



Ground water





# PFAS in farming



Soil contamination



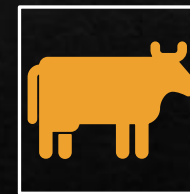
Irrigation water



Organic compost



Sludge  
fertilizers/biosolids



Animal feed



# PFAS in food packaging



Processing equipment



Food wrappers



Paper and compostable containers



Plastic containers

# What does this mean for our food supply?

PFAS have now been found in:

- \* Produce (stem, leaf, and fruit)
- \* Fish and other seafood
- \* Milk
- \* Eggs
- \* Meat
- \* Packaged products



# **ORGANIC FARMING IS NOT A COMPLETE DEFENSE**

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- Organic compost with PFAS paper products
- Organic fertilizers with PFAS-infused fish meal
- Organic animal feed absorbs higher levels of PFAS





# **The Regulatory Framework**

# **EU ORGANIC REQUIREMENTS DO NOT ADDRESS PFAS**



## No requirement to:

- Test soil or water
- Use PFAS-free fertilizers, compost, or PPPs
- Test produce or animal products
- Use PFAS-free processing equipment or packaging

## PFAS regulation in food:

- Concentrations of four PFAS compounds in food are regulated by Commission Regulation (EU) 2022/2388
- Recommendation (EU) 2022/1431 on the monitoring for the presence of all PFAS in fruits, vegetables, starchy roots and tubers, seaweed, cereals, nuts, oilseeds, food for infants and young children, foods of animal origin, non-alcoholic drinks, wine and beer



A small green seedling with two leaves is growing out of a crack in dry, cracked earth. The background is a vast expanse of cracked, parched soil under a bright sky.

## Food Regulatory Gaps

- ❑ Food regs apply only to
  - ❑ four PFAS
  - ❑ animal products
- ❑ Water regs apply only to drinking water
- ❑ No limits on PFAS in feed
- ❑ No provision for soil or water remediation
- ❑ No provision for farming assistance





- PFOS, PFOA, and PFHxS have been banned and regulated under POP
- Long-chain PFCAs are restricted under REACH
  - PFHxA currently being considered
- Directive (EU) 2020/2184 places limits on the presence of all PFAS in drinking water
- Classification, labeling, and packaging regulations of five long-chain PFAS compounds
- A current proposal to ban all PFAS as a class



# Proposed REACH Ban and Food

- Applies FCMs (with longer phase-out for industrial food & feed production equipment)

- Does not apply to:
  - food items
  - biocides & PPPs
  - fertilizers and compost
  - animal medicine
  - water

- Does not address historic contamination

# LEGAL IMPLICATION

- No legal obligation for farmers or food manufacturers to test for PFAS in soil, water, or products
- No legal obligation for farmers to remediate past contamination
- No legal liability for selling products containing PFAS, unless intentional adulteration



# ECONOMIC REALITY



- ✓ Voluntary and mandatory recalls
- ✓ Water remediation
- ✓ Soil remediation
- ✓ Higher cost of alternatives
- ✓ Brand depreciation
- ✓ Closing operations



The Road Ahead

# INCREASED RESPONSIBILITY

- Implement bans on intentional use of PFAS or PFAS-adulterated products in organic farming (including compost, pest control products, animal feed)
- Require PFAS testing of soil, irrigation water, and animal feed
- Implement bans on using PFAS FCMs (including food processing equipment) for the processing of organic products





## INCREASED SUPPORT

- Funding for research into:
  - PFAS uptake in plants
  - PFAS mitigation and remediation strategies
  - PFAS-resistant crops
  - PFAS-free alternatives
- Funding for:
  - Soil and water testing
  - Soil and water remediation
  - Subsidies for affected farmers

THANK YOU

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