

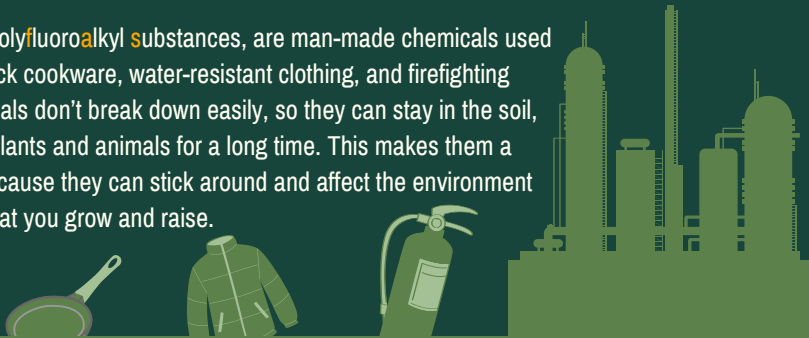
# PFAS in Agriculture

Understanding the 'forever chemical' problem



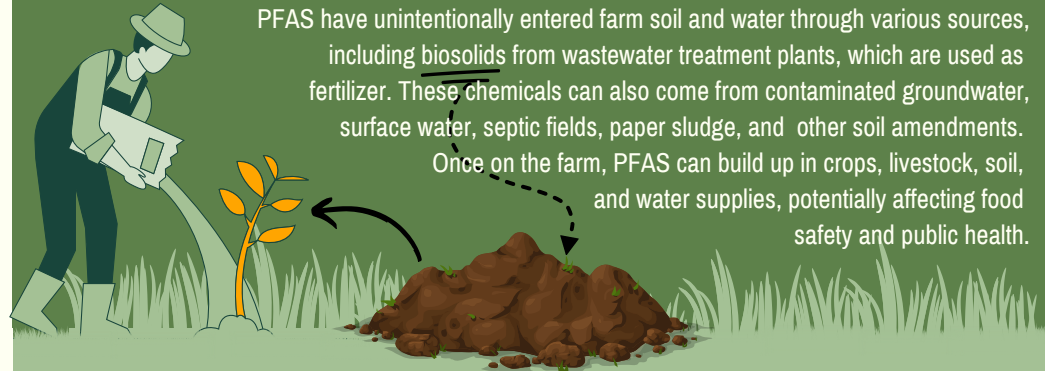
## So, what are PFAS?

PFAS, or per- and polyfluoroalkyl substances, are man-made chemicals used in things like non-stick cookware, water-resistant clothing, and firefighting foam. These chemicals don't break down easily, so they can stay in the soil, water, and even in plants and animals for a long time. This makes them a concern to farms because they can stick around and affect the environment and the safety of what you grow and raise.



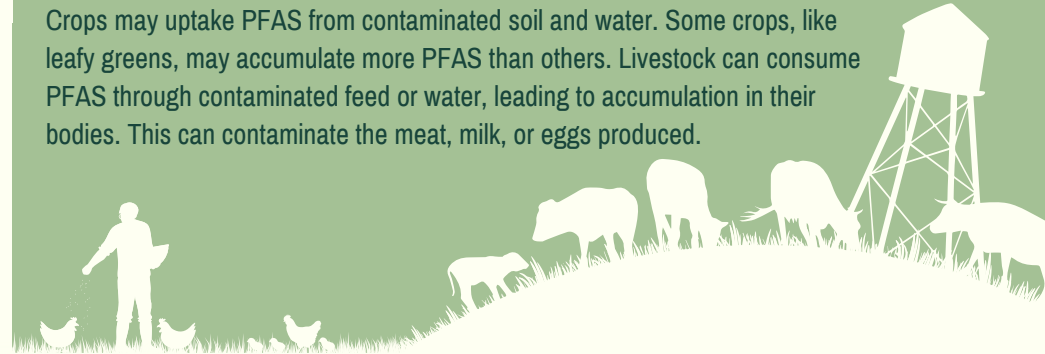
## How do PFAS get to Farms?

PFAS have unintentionally entered farm soil and water through various sources, including biosolids from wastewater treatment plants, which are used as fertilizer. These chemicals can also come from contaminated groundwater, surface water, septic fields, paper sludge, and other soil amendments. Once on the farm, PFAS can build up in crops, livestock, soil, and water supplies, potentially affecting food safety and public health.



## How do PFAS affect Crops and Livestock?

Crops may uptake PFAS from contaminated soil and water. Some crops, like leafy greens, may accumulate more PFAS than others. Livestock can consume PFAS through contaminated feed or water, leading to accumulation in their bodies. This can contaminate the meat, milk, or eggs produced.



## Potential Impact of PFAS

### Human Health Implications

Research has shown that PFAS exposure can cause serious health problems, including an increased risk of cancer, developmental defects, immune system disruption, among others.



### Economic Impact

PFAS contamination may render farmland unusable for traditional agriculture, reducing land value and productivity. Farm products may also be deemed unfit for human consumption.



### Environmental Impact

When PFAS-contaminated water or soil from farms enters local ecosystems, it can pollute rivers, lakes, and groundwater, harming wildlife and plants. Aquatic life, like fish, can absorb PFAS, which then enters the food chain, affecting both animals and humans.



## What can Farmers do?

### Water and Soil Testing

Especially if biosolids were applied to the farm or if it is located near known PFAS sources, such as airports or manufacturing facilities.



### Identify the Source of Contamination

Understanding how PFAS got onto your farm is essential for addressing the problem.



### Modify Farming Practices

Move animals to clean water sources and feed from uncontaminated areas.



### Collaborate with MSU

Michigan State University can provide guidance on navigating the contamination problem.



## Resources and Support

PFAS can significantly impact farm productivity, product safety, and long-term land health. Managing contamination may be complex and challenging, but with the right support and strategy, farmers can effectively reduce its effects. Below are useful resources to help farmers better understand and address PFAS:

- <https://www.canr.msu.edu/pfas>
- <https://www.canr.msu.edu/pfas-research>
- <https://www.michigan.gov/pfasresponse>

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