

Good afternoon Committee,

For the record, my name is Esme Cole, a Representative from Hartford and member emeritus of this committee. Thank you for the opportunity to speak on H.739—a bill which would ban the use and sale of paraquat in Vermont.

WHAT IS IT?

Paraquat is one of the most acutely toxic herbicides still in use in American agriculture. The EPA describes it as a synthetic, non-selective, contact herbicide, so it kills everything it touches. Paraquat is useful because it is a desiccant (drying agent). It creates free radicals and oxidative stress in plant tissue, which causes rapid drying and destruction. It has a half-life in soil ranging from 16 months to over 6 years, but can also be transported through dust and residue on the crops that people consume. It is primarily used on corn, grains, grapes, apples, strawberries, soy, and other beans.

WHAT'S THE HARM?

Unfortunately, paraquat's effect on human health is similarly destructive to that on plants. It targets mitochondria, which causes a range of harms, (oxidative stress, apoptosis) and importantly, can lead to neuronal degeneration. When people consume paraquat-treated food, the chemical can bind to a naturally occurring protein in food called lectin (especially prevalent in corn). Lectin provides a vehicle for the chemical to move through the GI system to the vagus nerve, and reach the brain. It specifically targets the region of the brain affecting motor function, among others. This is the mechanism behind its connection with Parkinson's Disease.

Decades of research indicate that **people who live or work near fields where paraquat has been sprayed are 2.5 times more likely to develop Parkinson's disease**. Paraquat is also connected to other health risks, including non-Hodgkin's Lymphoma (blood cancers that affect lymphocytes), kidney cancer, thyroid cancer, and other thyroid issues. These risks are borne disproportionately by farmworkers, pesticide applicators, and rural families who live and work closest to its use. New evidence in 2025 found that paraquat could travel further than was previously understood, potentially exposing more people.

In the EPA's own words, "paraquat has life-threatening effects on the gastrointestinal tract, kidney, liver, heart and other organs." Despite this, a federal ban has not been enacted.

POLICY HISTORY

More than 70 countries have banned the use of paraquat, including major agricultural producers like China, Brazil and the European Union, and Turkey. It is important to note that the countries behind paraquat synthesis and production do NOT allow the herbicide to be used on their own land—including China, Switzerland, and the UK. Data have consistently failed to show any negative impact of banning paraquat on agricultural productivity. In terms of profitability, our allowance for paraquat is actually hurting us. Several major destinations for our farm products have set very low maximum residue limits, including Thailand, South Korea, Brazil, the UK, and India. Banning paraquat would make it easier for our farmers to export to these markets.

Paraquat has been a Restricted Use Pesticide in the United States for decades, limiting it to certified applicators. The EPA significantly strengthened these restrictions in 2016, 2019, and 2021. This trend would appear to be moving slowly toward outright restriction, based on the EPA review process. But in looking ahead, it is important to consider that in 2025, the Trump Administration cut nearly a quarter of EPA research positions. Therefore, while we would have expected this review process to be slow already, we may need to remove our expectations for progress altogether for the time being. The burden of protecting public health for farmers, rural communities, and consumers is now more heavily on our shoulders. States do have the power to intervene. Missouri, Virginia, New Jersey, New York, and Pennsylvania legislatures have stepped up to introduce similar efforts to ban paraquat.

The question before us is: do the benefits of continuing with the status quo justify the extraordinary human cost. Thank you again for your time and partnership on this important issue, and I look forward to continuing the conversation.

LITIGATION AND SETTLEMENTS

As of January 2026, a confidential agreement was reached in April 2025 by Syngenta and Chevron to settle most Paraquat-related Parkinson's disease lawsuits. While a global settlement is pending, individual payouts are estimated to range from \$20,000 to over \$1 million, depending on injury severity. Litigation continues, with 1,603 cases reported in Pennsylvania as of January 2026

You all know, better than anyone, that farmers have a lot on their plate. No one should have to accept an elevated risk of neurological disease or death as a condition of earning a living. Many applicators follow label instructions meticulously and still face exposure through drift, equipment failure, or long-term environmental persistence.

Most U.S. farmers do not spray paraquat. Only 1% of all pesticide applications are paraquat. Paraquat is rarely used on major commodity crops like corn and soybeans.

DIQUAT

- **Federal Legislation (2025):** In September 2025, U.S. Representative Anna Paulina Luna (FL-13) introduced the Protect Our Farmers and Families Act of 2025 (H.R. 5196), which aims to cancel the registration and prohibit all uses of diquat in the United States.
- **Reasons for the Move:** The legislation was introduced due to concerns that diquat is toxic, poses unreasonable risks to the environment, and has been linked to dangerous side effects. Diquat is already banned in the European Union, the UK, and China.
- One of the greatest harms of diquat is renal damage.
- diquat (diquat dibromide) is commonly used as a direct alternative to paraquat in agricultural, industrial, and aquatic weed control, primarily because it is a

non-selective contact herbicide that works similarly but with lower acute toxicity to humans. It is often used as a desiccant (killing plant foliage before harvest) and for weed management.