We, the undersigned, are former senior officials in EPA's Office of Chemical Safety and Pollution Prevention which is responsible for federal pesticide regulation as well as senior scientists who worked on chemical issues in EPA's Office of Water and the Office of Research and Development. We write in strong support to ban the use of paraquat. A paraquat ban is a vital step toward protecting public health, safeguarding our agricultural communities, and aligning the US with global best practices.

Although ChemChina, which owns the largest paraquat maker Syngenta, is a Chinese state enterprise, paraquat cannot be used in China, even though most paraquat manufacturing takes place in China. Although Syngenta's headquarters are in Switzerland, paraquat cannot be used in Switzerland. More than 70 countries have banned the use of paraquat, including major agricultural-producing nations like China, Brazil, the European Union, and Turkey. Paraquat is no longer registered for use by Canadian farmers.

Paraquat is a highly toxic herbicide commonly used to clear fields before planting crops such as corn, soybeans, cotton, almonds, peanuts, and wine grapes. The human cost of paraquat is severe. Although EPA has imposed virtually every risk mitigation measure on its use, accidental exposures continue to occur, often causing serious harm. In a study of just one state, Pennsylvania, the Environmental Working Group (EWG) found 18 cases of accidental exposures from 2018-2023. Accidents have resulted from drinking from a container used to store or mix paraquat, if it touches your skin, and by breathing in particles or getting it in your eyes. Recently, a 60-gallon container of paraquat fell off a truck in Dorris, California which resulted in a lockdown for 600 residents including an elementary school due to the acute toxicity of paraquat. In addition to people, companion animals, especially dogs, have died from intentional and unintentional poisoning (e.g. drinking contaminated water).

The connection between paraquat and Parkinson's disease, a progressive, incurable neurological disorder, is a growing concern. A substantial body of scientific research—including studies supported by the National Institutes of Health has found that exposure to paraquat is associated with a higher risk of developing Parkinson's disease. Peer-reviewed research shows that exposure to paraquat, particularly when sprayed within 500 meters of homes or workplaces, more than doubles a person's risk of developing Parkinson's disease. Paraquat is also known to cause kidney damage in cases of high exposures. Some studies have also suggested possible associations with other conditions, such as thyroid disease, childhood leukemia, and non-Hodgkin lymphoma, though more research is needed to better understand these relationships. Taken together this body of evidence raises serious concerns about its impact on individuals, families, and our health care system.

Only 18 months ago, data developed by the manufacturer demonstrates that paraquat is more volatile than previously understood. That means that paraquat may be moving off the target site potentially exposing nearby communities. EPA's response was to require a field volatilization study to better quantify the off-site exposure. A more public health protective approach would be to take paraquat off the market.

Importantly, safer, effective weed management alternatives are available, and many farmers have already transitioned away from paraquat voluntarily.

Given the range and severity of risks of paraquat, and the availability of safer and effective alternatives, it is clear that paraquat should be banned in the US.

Betsy Behl, Director, Health and Ecological Criteria Division, Office of Water, EPA 2010-2024

Vicki Dellarco, Science Advisor to the Director, Office of Pesticide Programs, EPA 2008-2013

Penelope Fener-Crisp, Director, Health Effects Division, Deputy Office Director, Senior Science Advisor, Office of Pesticide Programs, EPA, 1989-2000

Denise Keehner, Director, Office of Pollution Prevention and Toxics, EPA 2022-2023

Arnet Jones, Deputy Director, Biological and Economic Analysis Division and Senior Science Advisor, Office of Pesticide Programs, EPA 2016-2018

James Jones, Assistant Administrator, Office of Chemical Safety and Pollution, EPA 2013-2017

Rita Schoeny, Senior Science Advisor, Office of Science Policy, Office of Research and Development, EPA (2012 – 2015)

Jennifer Seed, Deputy Division Director, Risk Assessment Division, Office of Pollution Prevention and Toxics, EPA 2009-2013

January 2026 - Summary table - Key studies in the understanding the link between paraquat exposure and Parkinson's Disease (PD)

Study Type	Critical Study Short Citation	Key Finding and Contribution
Reviews and Meta-analyses	Tangamorsuksan et al. (2018)	Analyzed 13 epidemiological studies and found an overall increased risk of 64% for Parkinson's disease from paraquat exposure.
Reviews and Meta-analyses	Vaccari et al. (2019)	Analyzed 10 epidemiological studies and found an overall increased risk of 24% for Parkinson's disease related to paraquat exposure.
Epidemiological Research	Tanner et al. (2011)	Paraquat applicators were over 2.5 times more likely to develop PD than non-users in the Agricultural Health Study (AHS) cohort.
Epidemiological Research	Paul et al. (2024)	Living or working near paraquat applications approximately doubled the risk of PD in people from three agricultural counties in California.
Epidemiological Research	Shrestha et al. (2020).	Paraquat applicators with a previous history of head injury were more than 3 times as likely to develop PD than controls in a follow up to the AHS.
Laboratory Studies	McCormack et al. (2002) and Manning-Bog et al. (2002)	Paraquat injection in mice caused selective, dose-dependent depletion of dopamine neurons, a hallmark of Parkinson's disease, as well as an increase in brain alpha-synuclein protein and

		aggregation, commonly known as Lewy bodies in PD.
Laboratory Studies	**Ren et al. (2009)**	**Ingestion of paraquat caused the same effects as paraquat injections in mice, including reduced dopamine levels, dopamine cells, and locomotor activity, mimicking PD symptoms.**
Laboratory Studies	**Anderson et al. (2021)**	**Inhalation of paraquat, a likely route of exposure for applicators, farmworkers, and people living or working near paraquat applications, can lead to detectable levels of paraquat in the brains of mice.**