

Regulatory History

Since its first registration in 1965, chlorpyrifos has been reviewed several times by EPA for tolerance reassessment, reregistration, and most recently, as part of its ongoing registration review. The following timeline summarizes the work EPA has done to ensure that, as science and technology evolve, registered chlorpyrifos products remain safe for use.

2000— Voluntary Agreement to Eliminate, Phase Out and Modify Certain Uses

In 1996, the Food Quality Protection Act set a more stringent safety standard to be especially protective of children. After finalizing the chlorpyrifos risk assessments for reregistration, EPA identified the need to modify certain chlorpyrifos uses to meet the revised standard of safety, and to address health and environmental risks from chlorpyrifos exposure. In 2000, the registrants of chlorpyrifos voluntarily entered into an agreement with EPA to eliminate, phase out, and modify certain uses. Some examples of the voluntary cancellations and modifications in the agreement include:

- Eliminating most homeowner uses, except ant and roach baits in child resistant packaging and fire ant mound treatments, and phasing out all termiticide uses.

Discontinuing all uses of chlorpyrifos products in the United States on tomatoes, restricting use on apples to pre-bloom and dormant application, and lowering the grape tolerance (maximum residue level) to reflect the labeled dormant application.

2002 — Label Changes to Ensure Environmental and Worker Safety

In 2002, EPA made a number of changes to the required safety measures that improved safety for the environment and for those applying this pesticide including:

- Use of buffer zones to protect water quality, fish and wildlife;
- Reductions in application rates per season on a variety of crops including citrus and corn; and
- Increase in amount of personal protective equipment to mitigate risk to agricultural workers.

2006 - Registration Eligibility Decision (RED) for chlorpyrifos, which finalized the 2002 Interim RED, and includes an overview of the chlorpyrifos human health risk assessment for reregistration.

2011 — Preliminary Human Health Risk Assessment

In 2011, as part of the registration review process, EPA completed a comprehensive preliminary human health risk assessment for all chlorpyrifos uses. This assessment included the results of extensive new research and the findings of a number of new studies that had become available since the agency's last human health risk assessment for chlorpyrifos, completed in June 2000.

2012 — Spray Drift Mitigation and Changes to Application Rates

In 2012, EPA significantly lowered the aerial pesticide application rates and created "no-spray" buffer zones for ground, airblast and aerial application methods around public spaces, including recreational areas, schools, homes and other sensitive areas to be protective of children and other bystanders.

2014— Revised Human Health Risk Assessment

In 2014, as part of the registration review process, EPA completed a revised human health risk assessment for all chlorpyrifos uses. The assessment updated the June 2011 preliminary human health risk assessment based on new information received, including public comments. EPA factored in exposures from multiple sources including from the exposures from food and water, from inhaling the pesticide and through the skin. EPA considered all populations including infants, children, and women of child-bearing age. EPA incorporated information from a 2012 assessment of spray drift exposure and as well as new restrictions put into place to limit spray drift.

2016 — Revised Human Health Risk Assessment

After receiving public comments on the 2014 risk assessment and feedback from the FIFRA Scientific Advisory Panel, EPA revised its human health risk assessment for chlorpyrifos in 2016.

2017-2019 — Denial of Petition to Revoke Tolerances

In March 2017, EPA denied a petition that asked us to revoke all pesticide tolerances (maximum residue levels in food) for chlorpyrifos and cancel all chlorpyrifos registrations. The Agency concluded that despite several years of study, the science addressing neurodevelopmental effects remains unresolved and further evaluation of the science during the remaining time for completion of registration review is warranted. As a part of the ongoing registration review, we will continue to review the science addressing neurodevelopmental effects of chlorpyrifos.

On Aug. 9, 2018, the U.S. Ninth Circuit Court of Appeals ordered EPA to ban chlorpyrifos within 60 days. The following month, the Department of Justice requested a rehearing before an *en banc* panel of the court's judges (an 11-judge panel), which was granted on Feb. 6, 2019, effectively vacating the earlier ruling. After hearing oral argument on March 26, on April 19, 2019, the court ordered EPA to issue a final decision with respect to the petition objections within 90 days and did not otherwise address the issues raised in the case.