When most people think about pesticides, most think of organic food that we buy from the grocery store. The number of pesticides and the types of harmful chemicals affects farming community to a degree where our next generation’s health is in jeopardy.

Many pesticides farmers use on their fields are labeled as known carcinogens. One of the most harmful chemicals, “1, 3 - D”, also known as Dichloropropene (Telone), a pre-plant soil sterilizer, leads to cancer and the amounts used are very high in some areas in California. Unfortunately, Telone is the third most-used pesticide in California. Telone causes birth defects in babies, reproductive harm in adults, and causes tumors in animals, but California is currently allowing 14 times more in the air than the “safe harbor level” of this carcinogen.

This pesticide can drift for 7 miles at harmful levels.[[1]](#footnote-1) Yet, the California Department of Pesticide Regulation (DPR) does not account for the drift from wind when they conduct the regulations of where the pesticides can be placed. There are reports of “acceptable” pesticide placement only ¼ mile away from a public school. Other studies suggest that normal pesticide drift is affecting families where the application is 2.5 miles away. These neighbors are at a 183% higher risk since they live within 2.5 miles of any state-identified cancer-causing pesticide. Current state regulations do not address exposure from such distances. Therefore, the DPR does not account for normal pesticide drift.[[2]](#footnote-2)

This is dangerous because exposure to pesticide drift during pregnancy may increase the risk of childhood central nervous system tumors. A pesticide known as Chloropyrifos is widely used in homes and farms but is suspected to be a hormone-disrupting compound. Known health issues caused by Cholorpyrifos cause health issues such as ADHD, autism, declines in IQ, and reduced cognitive function. Higher blood concentrations of Chloropyrifos during pregnancy are associated with poorer mental and motor development at 3 years of age. A 2014 UC Davis study showed mothers who lived one mile away from treated areas during their second trimester were 3.3 times more likely to have autistic children. This pesticide was banned for home, lawn, and garden use in California in 2000 after studies revealed the link between this pesticide and exposed mothers birthing babies with a smaller head circumference, which is a known indicator of reduced cognitive function. The chemical continues to be widely used in rural areas, where these children suffer a clear inequity.[[3]](#footnote-3)

Children are more vulnerable to pesticides than adults because of where they play, they have a higher respiratory rate, greater rates of cell division, lower body weight which increases their susceptibility to pesticide exposure, their bodies and brains are still developing, and pesticide concentrations in their fatty tissues may be greater because their fat as a percentage of total body weight is lower than it is for adults.[[4]](#footnote-4)

Children and babies are not the only ones at higher risk. Pesticides applied in California have a greater effect on the minority populations, as there is more than 10 times the amount applied in majority Latino counties than in counties where the Latino population is below 24%.[[5]](#footnote-5) In 2014, the California Department of Public Health reports in 15 agricultural areas studied, that Latino children are 46% more likely than white children to attend schools where highly hazardous pesticide use is within ¼ mile, putting approximately 10,000 students at risk.[[6]](#footnote-6)

Besides the immediate effect that the pesticides play on the community at large, this silent pandemic also affects all consumers who do not buy organic and do not properly wash their produce. Chlorpyrifos always leave residue on the exterior of foods. Chlorpyrifos are harmful especially in rural areas while others are affected solely by the food they eat.

In addition to the food we eat and the air we breathe, the spraying of pesticides also interrupts the natural ecosystem in the soil and the watersheds where the runoff water ends-up. The purpose of pesticides is to kill insects, pests, and weeds but it also kills orthopods and amphibians. Non-target orthopods play an essential role in ecosystems as pest-controls.[[7]](#footnote-7) The contaminated runoff water from pesticides poses an unacceptable risk to amphibians, who provide critical functions such as nutrient cycling and decomposition which is the foundation of a healthy aquatic ecosystem. Without these creatures, soil becomes less nutrient-dense, and bodies of water will fail to sustain other life sources.[[8]](#footnote-8)

There are many reasons to stop the spread of pesticide use and it is possible with the combination of scientific confirmation and public activism. However, 80% of DPR funding is from the fees associated with pesticide sales.[[9]](#footnote-9) It is not easy for organic farmers to take the lead in the produce market. The cost of organic is higher because of limited organic distribution, lack of government subsidies and support for organic production, and people ignore social and health impacts of conventional products. Organic farmers must purchase land where the soil has never been touched by chemicals. Once they start farming, they cannot label their products as organic until three years after they start farming. Organic producers benefit from few government investments. In addition, most public research funding does not help organic producers.[[10]](#footnote-10)

1. <https://www.pesticidereform.org/wp-content/uploads/2023/01/13-D-Report-Jan_2023-FINAL.pdf> [↑](#footnote-ref-1)
2. <https://www.pesticidereform.org/wp-content/uploads/2021/12/FINAL-202111-CPR-Childhood-Cancer-v4.pdf> [↑](#footnote-ref-2)
3. <https://www.pesticidereform.org/wp-content/uploads/2017/08/201708CPRChlorpyrifosFactsheet.pdf> [↑](#footnote-ref-3)
4. <https://www.pesticidereform.org/wp-content/uploads/2016/10/healthyschools.pdf> [↑](#footnote-ref-4)
5. <https://www.pesticidereform.org/wp-content/uploads/2021/12/FINAL-202111-CPR-Childhood-Cancer-v4.pdf> [↑](#footnote-ref-5)
6. <https://www.pesticidereform.org/wp-content/uploads/2017/08/201708CPRChlorpyrifosFactsheet.pdf> [↑](#footnote-ref-6)
7. <https://www.pesticidereform.org/wp-content/uploads/2023/01/13-D-Report-Jan_2023-FINAL.pdf> [↑](#footnote-ref-7)
8. <https://www.pesticidereform.org/wp-content/uploads/2017/08/201708CPRChlorpyrifosFactsheet.pdf> [↑](#footnote-ref-8)
9. <https://www.pesticidereform.org/wp-content/uploads/2023/01/13-D-Report-Jan_2023-FINAL.pdf> [↑](#footnote-ref-9)
10. <https://www.pesticidereform.org/wp-content/uploads/2022/11/FINAL-Organic-Ag-R-22-10-A_07_locked.pdf> [↑](#footnote-ref-10)