Agricultural pesticide use near schools

California agriculture produces nearly half of all fruits and vegetables grown in the United States. These foods are essential components of a healthful diet and help promote public health in the state and throughout the country. Agricultural production frequently relies on the application of pesticides, which can be hazardous to human health under some circumstances. Until now, little was known about the use of agricultural pesticides near schools in California.

CEHTP conducts study to track pesticide use near schools

CEHTP examined the use of selected agricultural pesticides near public schools in the top 15 counties by agricultural pesticide use in California for 2010. The goal was to improve the methodology for ongoing surveillance of agricultural pesticides in order to understand patterns of pesticide use. It is important to note that this study does not measure schoolchildren's actual exposures to pesticides. The use of pesticides near a school does not mean that exposure has occurred or that the health of any child or adult has been impacted. This study can suggest locations where the risk of exposure may be greater; however, actual exposure can only be determined by direct measurement of pesticides or their breakdown products in the body or inferred from physical symptoms or laboratory tests. The information in this study may help inform policy decisions related to pesticide use.

CEHTP obtained the best available data at the time of the study on...
pesticide applications, locations of agricultural fields, and locations of school buildings and grounds (provided by the Department of Pesticide Regulation, Department of Education, Department of Water Resources, and county agricultural commissioners). We then used GIS and data expertise to enhance the data’s geographic accuracy. We linked the pesticide use data with the school location data to determine the types and amounts of agricultural pesticides used within ¼ mile of public schools. We focused on pesticides of public health concern, which were selected based on known health effects or regulatory status.

New information generated

With this surveillance methodology, CEHTP assessed the use of selected agricultural pesticides within ¼ mile of public schools in 15 counties for 2010 (the most recent year for which pesticide use data were available at the time of the study). The study included 2,511 public schools, which were attended by over 1.4 million students in total. CEHTP was able to:

- Assess the types and amounts of pesticides used near schools
- Identify the top pesticides used near schools
- Determine which counties had the most schools and students near pesticide use
- Characterize student demographics for schools near the most pesticide use

Overall, we found that:

- **Most schools did not have any pesticides of public health concern used nearby.** We studied 2,511 public schools in 15 counties. We found that 64% of these schools (1,612 schools) did not have any pesticides of concern used within ¼ mile.

- **A small percentage of schools had many pounds of these pesticides used nearby.** The top 5% of schools with any pesticides of concern used within ¼ mile (45 schools) had amounts ranging from 2,635 lb to 28,979 lb.

- **Hispanic children were more likely to attend schools near the highest pesticide use.** Hispanic children were nearly twice more likely than White children to attend the schools in the top quartile of pesticides of concern used nearby. The amounts of pesticides used within ¼ mile of these schools ranged from 319 lb to 28,979 lb.

For more details on the study results, go to [www.cehtp.org/p/pesticides_and_schools](http://www.cehtp.org/p/pesticides_and_schools)
Results can inform future research and decision-making

It is important to note that this study did not attempt to measure schoolchildren’s actual exposures to pesticides and, therefore, cannot quantify specific doses or predict potential health impacts. The methodology developed for this study can be used by school officials, county agricultural commissioners, pesticide regulators, exposure assessment scientists, and others to:

- Assess and inform policies such as school-siting decisions and pesticide application permitting regulations
- Guide current and future monitoring efforts—such as air monitoring, soil sampling, and biomonitoring—and epidemiologic research studies
- Assess pesticide use near other potentially sensitive sites or populations

This study demonstrates the successful use of existing environmental public health tracking infrastructure to develop and implement a methodology that can identify locations where potential risks of pesticide-related exposure and health effects may be elevated.

Study indicates the need for better data

While conducting the study, CEHTP found that changes in how data are currently collected and disseminated would allow similar studies to be more easily conducted in the future. For example, standardized collection, accessible databases, and ongoing surveillance would offer better information for research purposes.

For more information

The report and related materials can be found at [www.cehtp.org/p/pesticides_and_schools](http://www.cehtp.org/p/pesticides_and_schools). Inquiries should be directed to the CDPH Office of Public Affairs at CDPHPPressOPA@cdph.ca.gov.

CEHTP Begins Community Air Monitoring Project in Imperial County

CEHTP has been awarded a new grant from the National Institutes of Health to conduct a 4-year community-based air monitoring research project in Imperial County, CA, in partnership with Comité Cívico del Valle (a local community organization and long-time collaborator), the
The broad goal of this project is to use a community-engaged research process to better understand air pollution patterns in Imperial Valley in order to reduce air pollution exposures and improve health among residents.

The project will engage members from impacted communities to design an Air Quality Monitoring Network (AQMN) consisting of 40 low-cost, portable air monitors placed throughout Imperial County. Community participants will map community assets and environmental hazards to inform the placement of the monitors, which will be set up and maintained by trained community members and will remain in the community after the project ends. The data collected by the monitors will be displayed for public use on the

**Imperial Visions Action Network (IVAN)**, the community-based environmental reporting site developed by Comité Cívico del Valle and other partners for Imperial County.

Using advanced analytical methods, data from the AQMN will be used to develop highly detailed maps of air quality throughout the county, enabling identification of hot spots near vulnerable communities. These results will inform the development of a community-driven public health action plan for reducing exposures and improving health. The project team is currently reaching out to potential collaborators and stakeholders for this project, including other organizations currently working to monitor air quality or address environmental concerns in Imperial Valley.

To learn more about this project, click [here](#) or contact CEHTP at tracking@cdph.ca.gov or (510) 620-3038.

**New Public Health Resources Available**

**Healthy Housing Report**

The California Department of Public Health’s (CDPH) [California Breathing Asthma Program](#) recently released its first Healthy Housing report to inform, support, and enhance the efforts of stakeholders who are working to improve housing throughout California. The report provides state-level data relating to the overlap between housing and health on over thirty indicators such as lead poisoning, second hand smoke, and unintentional injury. Main report findings relate to health disparities, poverty, and inadequate access to healthy housing. Click [here](#) to download the report.

**Cosmetics Database**

CDPH’s [California Safe Cosmetics Program](#) recently launched a searchable cosmetic product database that contains data from cosmetic companies on products with a chemical ingredient known to
cause cancer or reproductive harm. This is a publically accessible database where users can search by specific products, brand names, or chemical ingredients. The database also has useful information for consumers who use cosmetics and how exposure to chemicals can affect health. Click here to access the database.

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