Pesticide Exposures

This metadata page provides a brief summary of this dataset. More detailed data and metadata may be available from the Louisiana Department of Health (LDH) Tracking Program. For more information, please refer to the contact information on the last page under 'Questions?'

Background

Pesticide exposures can sometimes lead to pesticide poisonings. A pesticide exposure occurs when humans come into contact with pesticides, which are chemicals intended to control pests. Pests are anything from insects such as ants, mosquitos, roaches or wasps to rodents and larger mammals such as mice, rats, or bats. Pesticide exposures vary, and may result from a single, short-term exposure to high levels of pesticides. There could also be a long-term exposure to high levels of pesticides, or a long-term exposure to low levels of pesticides. There are many different sources or ways people can be exposed to pesticides. For example, they may come into contact with pesticide residues in the air, water, soil, sediment, plants, food, or through contact with animals. The most common exposure scenarios for pesticide-poisoning cases are bystander exposure to off-target drift, followed by the general public who are exposed through environmental contamination, occupational exposures, and accidental or suicidal poisonings.

Data Sources

- Louisiana Department of Health Pesticide Surveillance Program

The Louisiana Department of Health (LDH) Environmental Public Health Tracking Program receives pesticide exposure data from within the Section of Environmental Epidemiology & Toxicology (SEET). Agricultural Land (Cropland Acres) is a publicly available dataset through the US Department of Agriculture (USDA).

Vintage: The latest dataset available for all pesticide exposures and agricultural land, cropland acres, as of June 2025 is 2022.

Data Measure(s)

The LDH Tracking program collects data on the following measures:

- All Pesticide Exposures, statewide by year
- Acres of agricultural or rural areas: Agricultural Land, Cropland Acres by parish

Explore Data

The LDH Health Data Explorer (http://ldh.la.gov/tracking) is an online query tool which allows health, environmental hazard, exposure and population data to be explored and viewed side-by-side in tables, charts, and maps. These data can be viewed, printed and downloaded for further analysis.

To *Explore Data* on the query tool:
Step 1: Select Criteria

Category: **Exposures**
Topic: **Pesticide Exposures**

Pesticides and your Health

The LDH Health Data Explorer contains information on the total number of reported pesticide exposures in Louisiana each year. These measures currently reflect pesticide exposure reports received by LDH from 2017 through 2022. Pesticide exposure reports come from a variety of sources including the Louisiana Department of Agriculture and Forestry, the Louisiana Poison Control Center, laboratory tests, and reports from healthcare providers.

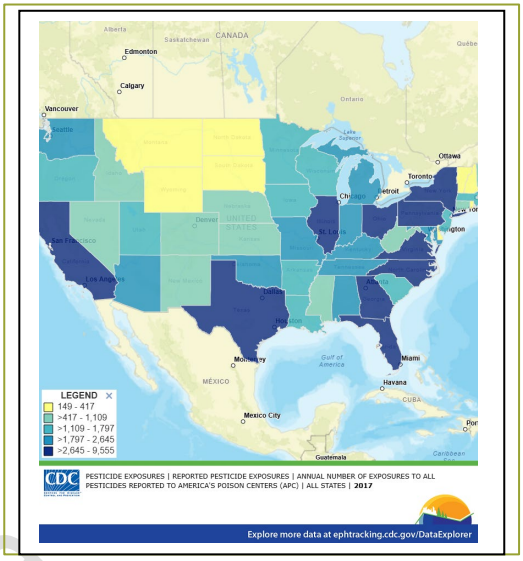

Figure 1 PESTICIDE EXPOSURES | REPORTED PESTICIDE EXPOSURES | ANNUAL NUMBER OF EXPOSURES TO ALL PESTICIDES REPORTED TO AMERICA'S POISON CENTERS (APC) | (2017). CDC Tracking Program Data Explorer.

Pesticides and the Environment

New research has implicated certain pesticides in animal and human disease. One such association is kidney dysfunction in humans. Using US National Health and Nutrition Examination Survey (NHANES) data, researchers found people exposed to higher amounts of a pesticide had higher risk of developing kidney dysfunction (University of Queensland. "Pesticide linked to chronic kidney disease." Science Daily, 14 October 2021). Another finding indicated high pesticide exposure was linked to end-stage renal disease (ESRD).[1] According to the US Environmental Protection Agency (US EPA), "organophosphates and carbamates, affect the nervous system. Others may irritate the skin or eyes. Some pesticides may be carcinogens. Others may affect the hormone or endocrine system in the body," US EPA, Accessed June 2025.

Data Methods

Pesticide exposure data are maintained in a pesticide surveillance database identified as SENSOR-Pesticides Incident Data Entry and Reporting (SPIDER) which is managed by the LDH Section of Environmental Epidemiology and Toxicology.

Data Limitations and Important Considerations

Acres of agricultural lands in Louisiana parishes are reported to provide supplementary information on potential risk of pesticide exposures from farming. Note, these data are not intended to indicate any type or incidence of human exposures to pesticides. Pesticide use varies by crop type and many other factors. Even if a certain crop type can be identified, data on pesticide use should be requested separately from the USDA and partner agencies.

Data Re-release

This is a public dataset which can be freely shared. Personally identifiable health information have been removed. Please refer to the Data Methods section of these metadata from more information.

[1] Zineb ben Khadda, Moustapha Fagroud, Yahya El Karmoudi, Said Ezrari, Laila Elhanafi, Andrei-Flavius Radu, Simona Gabriela Bungau, Tariq Sqalli Houssaini, Association between pesticide exposure and end-stage renal disease: A case-control study from Morocco based on the STROBE guidelines, Ecotoxicology and Environmental Safety, Volume 288, 2024, 117360, ISSN 0147-6513, https://doi.org/10.1016/j.ecoenv.2024.117360. (https://www.sciencedirect.com/science/article/pii/S0147651324014362)

Data Citations

Please cite the US CDC, LDH Environmental Public Health Tracking Program Cooperative Agreement NUE1EH001490, and any data source(s) listed on Page 1 when re-sharing or applying these data in analyses or publications.

Disclaimer

Data are intended to spur further research and should be used only as a starting point to understanding how the environment and other contributing factors may be connected to disease. Datasets presented on the LDH Health Data Explorer site are intended to answer some basic questions, but should ultimately lead to further inquiry and more detailed study.

Data limitations should be noted if conducting exploratory ecological studies with these data. Limitations may include data gaps, reporting discrepancies (for example, a disruption of reporting or instrument recording) and insufficient data on all potentially confounding factors. There are numerous additional factors which may contribute to disease onset. These include genetics, access to health care, existing health conditions, medicines, other chemical substances we come into contact with or ingest, nutrition, route and duration of exposure, level of activity, level of stress, and others.

Responsible use of this data requires exercising caution when drawing conclusions based solely on views of the limited available data. Any perceived relationship, trend, or pattern apparent in the data should not be interpreted to imply causation; may in fact be unrelated; and should be regarded as preliminary, and potentially erroneous, until more in-depth study and if applicable, statistical evaluation, can be applied.

The LDH Bureau of Health Informatics and Environmental Public Health Tracking Program cannot guarantee the completeness of the information contained in these datasets and expressly disclaim liability for errors and omissions in their content.

Additional Information

Please visit the following links for more information:

- US CDC | Pesticide Illness and Injury Surveillance

Questions?

- Email: healthdata@la.gov
- Website: http://ldh.la.gov/tracking
- Toll free Phone: 1-888-293-7020