

Acute Pesticide-Related Illness and Injury in North Carolina, 2017–2021

1346 Total Pesticide-related Illness and Injury Cases

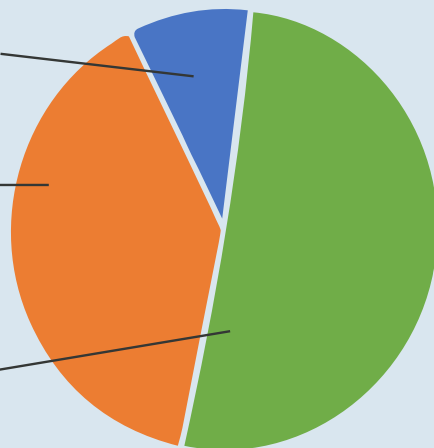
129 Occupational

72.4% adult males aged 20-69; 21.2% reported Hispanic ethnicity*

9.3% farming, fishing, and forestry

39.5% building/grounds cleaning and maintenance

51.2% other or unknown



Top products:

- Insecticides (50.9%)
- Herbicides and or algicides (34.5%)

*Reported ethnicity (Hispanic / non-Hispanic) was unknown for 25 (19.4%) occupational cases.

1212 Non-Occupational

51.7% female, 48.3% male and 14.8% children under 12 years

What pesticides are used?

- Insecticides (76.5%)
- Herbicides/algicides (9.2%)
- Insect repellent (8.3%)

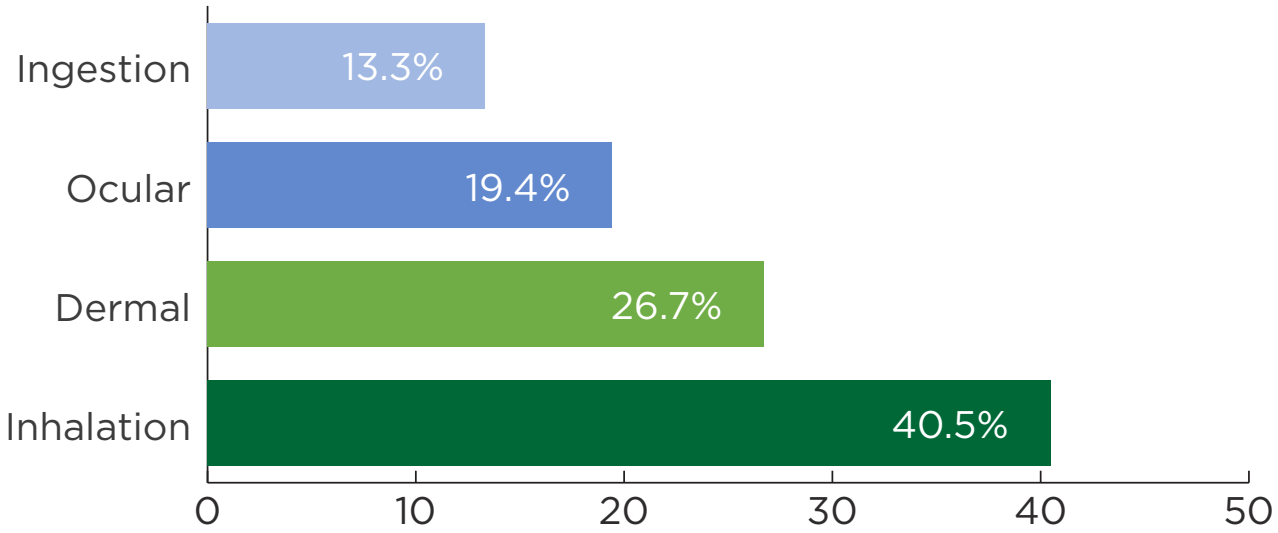
Where are they being used?

- Applied to building surface or structure (45.1%)
- Applied to skin and/or hair and clothing (14.6%)
- N/A (11.4%)

How are they being applied?

- Pressurized can (31.1%)
- Manual placement (21.4%)
- Total release fogger or aerosol bomb (17.3%)

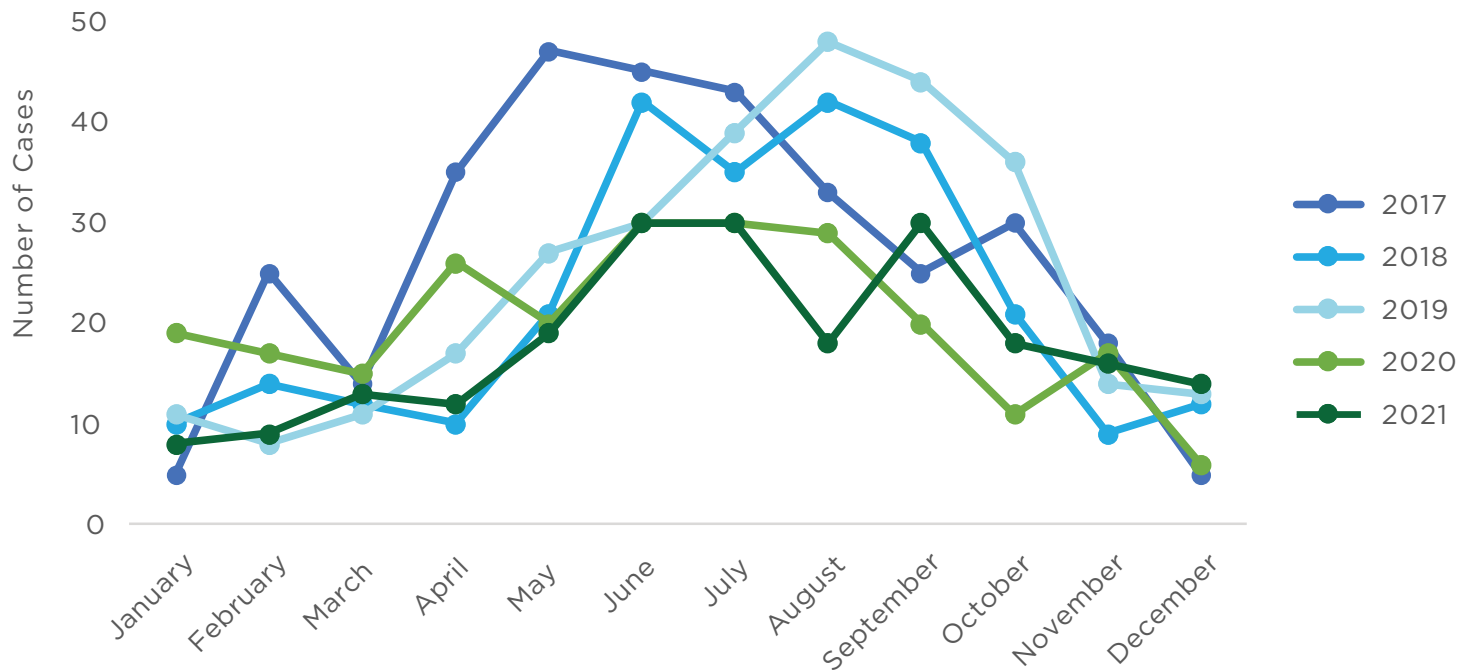
Top Routes of Pesticide Exposure



*Some individuals had more than one route of exposure.

Number of Pesticide-Related Illness and Injury Cases

Pesticide use increases during the late spring, summer, and early fall months. The number of pesticide-related illness and injury cases is typically highest during this time.

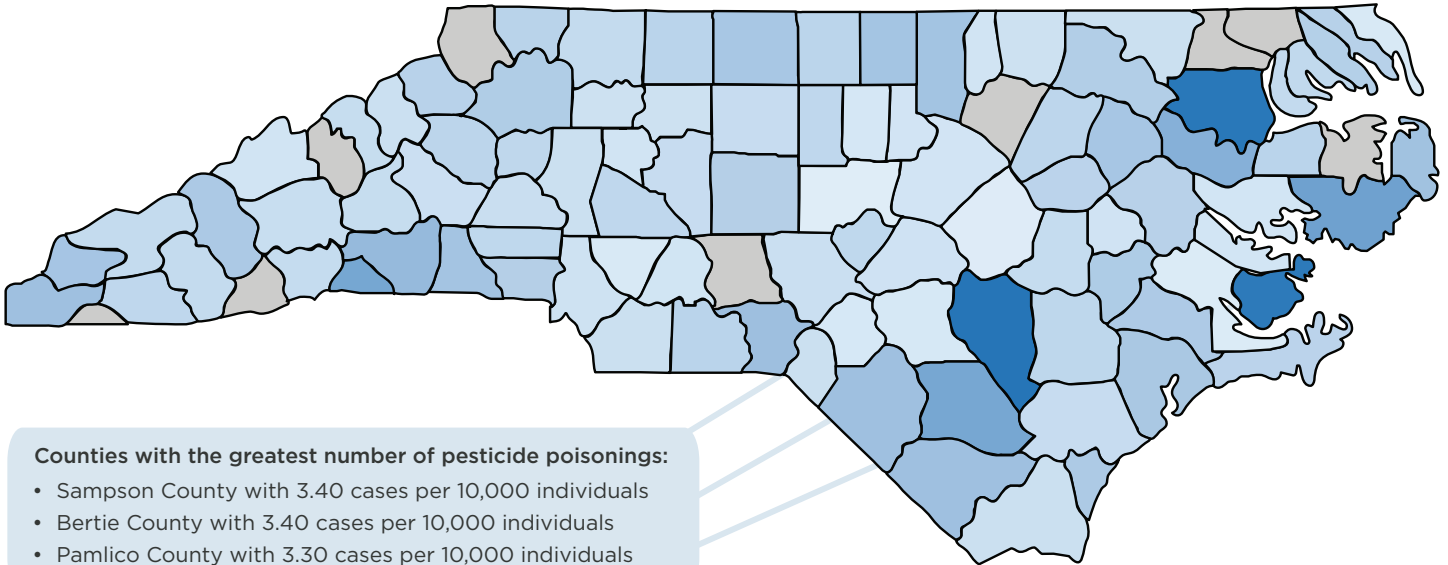


Compared to 2017, there was a **33%** decline in the number of pesticide poisonings in 2021. However, the COVID-19 pandemic likely contributed to underreporting of pesticide-related illness and injury due to healthcare services being strained, as well as impacting healthcare seeking behavior of patients.

During the Past Five Years, Pesticide Poisonings Occurred Across North Carolina

Cases by county (n=726)

Estimated incidence of acute pesticide-related illness and injury cases per 10,000 persons, by county



Counties with the greatest number of pesticide poisonings:

- Sampson County with 3.40 cases per 10,000 individuals
- Bertie County with 3.40 cases per 10,000 individuals
- Pamlico County with 3.30 cases per 10,000 individuals

*This map includes occupational and non-occupational cases where data were available (n=726/1346).

Top Signs and Symptoms of Pesticide Poisonings



Respiratory (24.1%)



Gastrointestinal (18.7%)



Nervous / sensory (17.2%)



Direct contact with and/or injury to eye (14.3%)



Irritation or sensitization of skin (13.6%)



Cardiovascular (5.1%)

*Some individuals had more than one type of symptom.

North Carolina is ranked:

- 10th agriculture-producing state in the nation in cash receipts
- 6th in the nation in number of migrant farmworkers

~1 billion pounds

of pesticides are used in the U.S. each year.

Hundreds of millions of pounds

are used in U.S. agriculture to promote higher crop quality and yield.

Over 75% of U.S. households

use pesticides, and approximately two thirds treat major indoor living areas with pesticides at least once per year.

What can **YOU** do to prevent Pesticide-related Illness & Injury?



If a pesticide poisoning is suspected call NC Poison Control immediately at:
1-800-222-1222



In the workplace:

- Read and follow label instructions for storage, handling, application, and proper personal protective equipment
- Maintain equipment to prevent spilling and or splashing



At home:

- Read and follow label instructions for storage, handling, application, and proper personal protective equipment, including eye protection.
- Keep pesticides away from children and do not store pesticides in non-approved containers (such as soda or water bottles)
- Limit pesticide use when possible by using Integrated Pest Management



For healthcare professionals:

- **Report pesticide poisonings to NCDHHS by calling NCPH at 1-800-222-1222. Pesticide poisonings are a legally reportable condition in NC.**
- Ask patients with associated symptoms questions about chemicals used, especially during the late spring, summer, and early fall months
- Ask patients about occupation and industry to evaluate possible pesticide exposures
- Promote training to improve awareness and diagnosis of environmental and occupational health issues among healthcare professionals