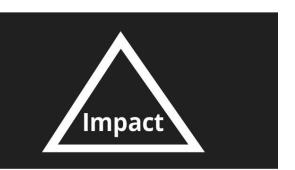
Protecting Farmworkers and Families From Pesticide Exposure

Fundamental Questions

Application and Synthesis

Implementation and Adjustment





1987-1990

Identified connection between childhood leukemia and parental occupation.^{1,2}

1995-2000

Found that dust in farmworkers' homes contained pesticides and documented higher pesticide exposures among children in agricultural communities, providing evidence of take-home exposure pathways.^{3,4}

2000-2005

Developed new wipe sampling method to assess pesticide levels in household dust.^{5,6}

2008-2009

Implemented behavioral interventions to minimize transfer of pesticide residue from work clothes to the home.⁷⁻⁹

2000-2012

Developed new methods to assess pesticide exposure using surveys and self-reports,^{10,11} individual-level activity data,^{12,13} and analyses of blood, urine, and teeth.⁹



Informed implementation of the EPA Worker Protection Standard for farmworkers. 18



Documented lower pesticide levels with implementation of the Worker Protection Standard.¹⁹ 2013-2014

Developed new sampling methods to assess pesticide levels in ambient air. 20,21

2014-2017

Used silicone wristbands to assess individual pesticide exposure levels. 22-24



EPA updated the Worker Protection Standard for farmworkers.²⁵ 2015

Implemented randomized controlled intervention to change farmworker behaviors.²⁶



Informed communities of research findings.²⁷



Systematic review of interventions to promote pesticide safety showed that multifaceted programs — a combination of education, home visits, and personal protective equipment — are most effective in changing farmworkers' behavior.²⁸



NIEHS supported research for all of the milestones highlighted above.