

# PRECARIOUS PROTECTION

Analyzing Compliance with Pesticide Regulations for Farmworker Safety

 Center for Agriculture & Food Systems  
VERMONT LAW & GRADUATE SCHOOL

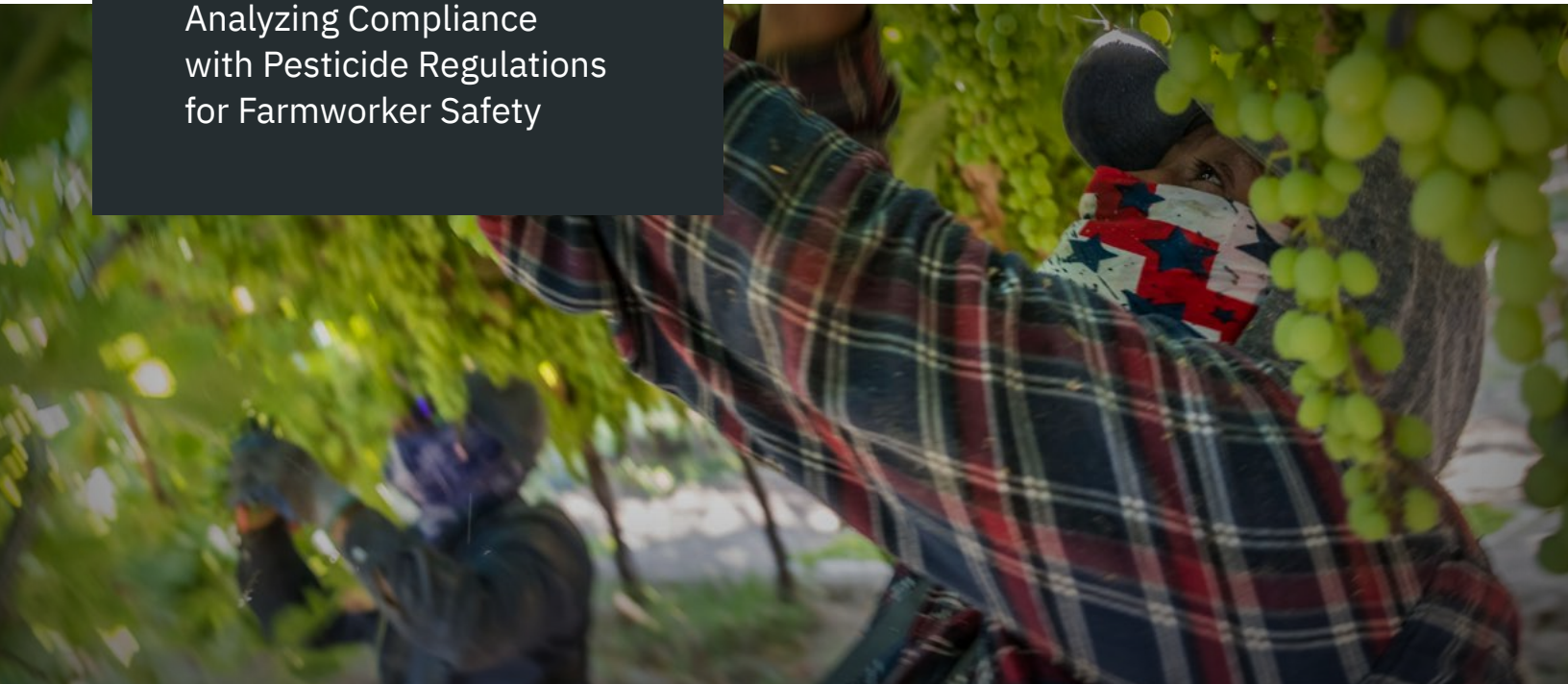


Photo Credit: David Bacon

## EXECUTIVE SUMMARY

Everyone deserves a workplace that prioritizes their health and safety. Unfortunately, farmworkers seldom find themselves in such a work environment. Pesticide exposure is one of the major threats these workers encounter, with health impacts ranging from the acute to the chronic. These risks extend beyond the fields. Pesticide residue frequently travels home with workers and exposes their families.

The Worker Protection Standard (WPS) is the main federal regulation intended to address the risks associated with pesticide-related illness and injury among farmworkers. The Environmental Protection Agency (EPA) established and enforces the regulation.

Compliance with the WPS should reduce pesticide risks to workers. Unfortunately, many farms do not comply with the WPS. The actual rate and quality of compliance is difficult to assess. As detailed in *Exposed and at Risk*, state and federal enforcement data are unreliable. Still, the reported data provide some insight into compliance rates. In 2021, states inspected 3,092 facilities and recorded 1,491 violations; tribes inspected 40 facilities and noted one violation; and the EPA inspected no facilities. Surveys and qualitative research also indicate that many employers do not fully comply with the WPS, though much more research is needed. There are also shortcomings with the WPS. No evaluation of the standard's effectiveness has ever taken place.

The EPA supports and monitors compliance through a variety of cooperative agreements with universities, community-based organizations, and state enforcement agencies. Stakeholders have critiqued the execution of some of these functions, and there are opportunities for improvement.

# EVALUATING THE WPS AND COMPLIANCE

This section summarizes key components of the WPS and current shortcomings.



## Training for Employees

---

The 2015 revision to the WPS increases the frequency of training to be annual (from five years previously), requires that training take place before any work commences, and adds new subject matter. Issues with the status quo include:

- Most employers provide training through video, which offers little to no engagement with the material.
- The more engaging, facilitated trainings reach just a small proportion of workers.
- The WPS does not include any measures to verify retention or comprehension of the critical safety information presented through the training.
- The WPS does not require any refresher trainings for workers during the season or for certified pesticide applicators who may administer the training.
- Some workers are not receiving training at all.



## Access to Information

---

Employers are required to display, maintain, and record certain information on pesticide applications and pesticide safety to keep workers informed of the risks. Current challenges include:

- Some employers are not properly posting safety information in a central location.
- The central location selected may not be in a place where workers regularly congregate.
- Language barriers can limit access to information where a translation is not provided.
- The posting of outdated information undermines trust in the information displayed.
- The WPS does not require employers to display information through maps, diagrams, or other pictorial formats that would be easier to understand.



## Entry Restrictions: Application Exclusion Zone

---

First established in the 2015 revision to the WPS, the Application Exclusion Zone (AEZ) is a no-entry area that surrounds pesticide application equipment in all directions. The size of the AEZ depends on the application type. If anyone enters the AEZ, the handler must suspend the application. Challenges with the status quo include:

- Pesticide drift occurs beyond the AEZ radius.
- Drift can reach worker housing, which often is not well-insulated.
- State officials report challenges in monitoring compliance with the AEZ and documenting violations.
- Some employers are confused about their obligations because of changes the Trump Administration tried to make to the standard, even though those changes never went into effect.



## Entry Restrictions: Restricted-Entry Interval

---

The Restricted-Entry Interval (REI) is a time period following the application of any pesticide to an area of outdoor production. During the REI an agricultural employer must keep workers out of the “treated area.” The rule also requires warning signs or oral notification to workers, depending on the circumstance. Issues with the status quo include:

- Some employers and farm managers send workers into treated areas too early.
- Posted warning signs often remain in place after the REI ends. Workers become accustomed to seeing outdated signs in the field and cannot tell when they should take the sign seriously.
- There are exceptions to the REI that allow employers to send workers back into treated areas during the period in which the risk of harmful pesticide exposure is most acute.



## Personal Protective Equipment

---

Employers must provide Personal Protective Equipment (PPE) to pesticide handlers and early entry workers to minimize their exposure to pesticides. Issues with the status quo include:

- Many workers who may encounter pesticide residues are left out of this requirement.
- Uncomfortable or poor-fitting PPE, insufficient PPE available, workplace norms, and poor training can decrease use of PPE.
- In high temperatures, workers can face increased medical risks if they exert themselves while wearing PPE.



## Decontamination Supplies

---

Employers must provide, in a reasonably accessible location, a means to wash off pesticides and pesticide residues for workers who come in contact with anything that has been treated with a pesticide, including soil, water, and plants. Current deficits include:

- Decontamination supplies are often too far from the workers' location.
- Poor planning or neglect can lead to avoidable deficits.
- Workers may be discouraged from using decontamination supplies due to short or nonexistent breaks and workplace norms.
- Workers may be less likely to engage in washing as a protective behavior as compared with other protective behaviors, like wearing protective clothing.



## Emergency Assistance

---

Employers must provide workers with prompt transportation to a medical facility when there is suspected pesticide exposure or the worker has symptoms of pesticide exposure, such as fever, vomiting, chills, and dizziness. Compliance deficits with this requirement include:

- Workers often do not know that their symptoms reflect pesticide illness rather than another illness. If an employer does not tell workers about an application, the worker may also not have the information needed to link their symptoms to pesticide exposure.
- Workers fear retaliation, termination of a work visa, or deportation will result if they seek medical attention.
- Employers often do not have an emergency plan or injury and illness prevention plan in place, which can leave managers unaware of what steps to take when an incident occurs.
- Medical facilities and services are sparse in rural areas where most farms are located, adding inconvenience and transportation times as deterrents.

# FACTORS SHAPING THE COMPLIANCE LANDSCAPE

Various factors, systems, and entities influence WPS compliance among growers. These factors include:

- **Socio-cultural factors affecting growers:** Growers often perceive the health risks affiliated with pesticides to fall on pesticide handlers and not with workers engaged in other tasks. Older growers accustomed to more lenient requirements and lax enforcement, as well as smaller operations with more constrained resources, may lack the motivation to come into compliance.
- **Socio-cultural factors affecting workers:** There is wide variation in worker perception of the risks that pesticides pose to their health. There is also variation in awareness of pesticide use and exposure in the workplace. Language barriers can limit access to information and understanding of these risks. Uneven power dynamics and fear of retaliation hinder workers' ability to hold employers accountable.
- **Economic considerations facing growers:** The costs associated with the WPS requirements are relatively minor. However, a grower's experience of increasing regulatory costs in general may deter compliance. The low penalties and low risk of receiving a penalty for violations do little to incentivize compliance.
- **Workers' compensation:** Some states require agricultural employers to carry no-fault insurance coverage for work-related illnesses and injuries. This requirement can encourage compliance because workplace injuries increase insurance costs.
- **Anti-retaliation and confidential reporting:** The WPS prohibits employers from retaliating against employees. However, workers still fear retaliation, and the WPS does not guarantee confidentiality when a worker reports a violation.
- **H-2A Visa Program:** The H-2A program allows qualifying U.S. growers to hire foreign nationals to fill temporary agricultural positions when they face a labor shortage. The H-2A regulations do not require "know your rights" training or that workers receive safety information when they arrive at their job.
- **Farm labor contractors:** The presence of a farm labor contractor can encourage exploitation by obscuring employment relationships and responsibilities. In the WPS context, the rule is clear that the ultimate responsibility for WPS compliance lies with the agricultural employer—defined as the owner or manager of the agricultural establishment.
- **Private compliance oversight:** In the absence of robust government oversight, private initiatives have stepped in to play an oversight role as well. These include **worker-driven social responsibility** programs, **unions**, and **third-party verification programs**.
- **Organics:** Although organic growers tend to use fewer chemicals, they may still use substances that require compliance with the WPS. Organic certification does not include any labor standards, so "organic" does not necessarily mean "safe" for workers. Still, organic agriculture *can* help protect farmers and farmworkers by reducing exposure to most toxic synthetic pesticides.

# RECOMMENDATIONS

This final section summarizes the authors' recommendations to improve the WPS and compliance. Further background on the issues described in this Executive Summary, support for these recommendations, and additional recommendation detail can be found in the full-length report.

## Overarching Recommendations

---

- Commission the development and inclusion of additional pesticide-related questions in the National Agricultural Workers Survey to provide a better understanding of WPS compliance and implementation on the ground.
- For EPA administration of cooperative agreements:
  - Incorporate stakeholders in the development of requests for applications and more precisely specify priority activities, deliverables, and processes for applicants.
  - Consider administering smaller-scale cooperative agreements so that grantees can focus attention and energy on a narrower set of activities.
  - Collaborate with recipient organizations to develop a public-facing work plan that is published on the EPA's website and updated with progress reporting at regular intervals.
  - Encourage partnerships that bring a range of expertise to projects, ensuring that community-based organizations play a significant or lead role in steering projects that aim to benefit farmworker communities.
- Support research examining the efficacy of compliance monitoring activities conducted by bilingual and monolingual (English-speaking) inspectors.
- Support the education, training, and recruitment of bilingual inspectors and move toward making language skills a job requirement.
- Engage in a national campaign, tailored to each region, to raise awareness of these obligations and their importance.
- Evaluate the WPS overall and its individual components for protecting and promoting farmworker health and safety.
- Amend the Federal Insecticide, Fungicide, and Rodenticide Act to include a private right of action for WPS violations, with civil penalties recoverable by the workers put at risk.



## Training for Employees

---

- Involve farmworkers, farmworker organizations, and WPS trainers in EPA-funded projects that design, develop, review, and evaluate WPS training materials.
- Incorporate evidence-based approaches to design and evaluate effective training.
- Encourage or require that farmworker training be provided in an appropriate and engaging format and that it be culturally and geographically relevant.
- Encourage or require refresher training for non-certified trainers.
- Encourage or require that certified applicators be educated in effective training methodologies.
- Encourage or require that workers receive refresher trainings (i.e., tail-gate trainings) on pesticide safety regularly.
- Work on developing best practices in partnership with farmworkers and grassroots organizations to improve upon industry and regulatory standards in the future.
- Consider incentives that encourage employers to meet their obligations by allowing nonprofit and grassroots organizations to provide training with sufficient, dedicated paid work time.



## Access to Information

---

- Encourage or require that the central display information include the application area in picture format.
- Conduct surveys or focus groups with farmworkers to gather input on the most effective way to communicate safety information and collaborate with community-based organizations to ensure accessibility and cultural relevancy of safety materials.
- Encourage or require pesticide safety information to be posted at additional locations, such as water stations, bathrooms, worker transportation, and worker housing.
- Encourage or require pesticide application information to be conveyed in the languages understood by workers at that operation.
- Provide safety and application information in several languages in pocket-sized cards and a mobile-friendly format so workers can carry it with them.
- Encourage or require growers to permit use of mobile phones for information retrieval at the worksite and allow worker use of grower Wi-Fi networks, where available, to enable access.
- Expand the fifth iteration of the Pesticide Registration Improvement Act (PRIA 5) bilingual pesticide labeling requirement to include directions for use.
- Expand the PRIA 5 bilingual pesticide labeling requirement to include languages in addition to Spanish.
- Encourage or require growers to post the bilingual pesticide information and/or the corresponding QR code along with the application information in a central location and at various worksite locations where workers are present.
- Encourage or require that the central display reminds the worker that they have access to the record for two years and provides information on how to request it.



## Entry Restrictions

---

- In the near term, finalize the 2023 AEZ proposed rule, putting to rest any lingering confusion regarding the applicability of the 2015 Rule's provisions.
- Longer term, increase the AEZ radius and lengthen its application window as a precautionary and more protective approach.
- Ensure that farmworkers' housing facilities provide adequate protection against pesticide drift infiltration.
- Establish buffer zones around farmworker housing where pesticides may not be sprayed. Require employers to provide alternative housing or accommodations if a buffer zone cannot be maintained.
- Encourage or require advance notification of farmworker housing residents so that workers can take precautions and/or leave temporarily.
- Encourage or require posting of warning signs along the path of an AEZ that extends into public thoroughways beyond the establishment.
- Require REI warning signs to include the date and time at which the relevant entry restriction commences and ceases.
- Require REI warning signs to include the name of the pesticide and product involved in the application.
- Encourage or require warning signs for applications with an REI greater than 24 hours.
- Encourage or require employers to document the method, location, date, and time that warnings were communicated to workers.
- Rescind the "agricultural emergency" and other early reentry exceptions to the REI requirements and review alternative means for agricultural establishments to recover losses from "agricultural emergencies" through insurance or indemnification rather than putting workers in jeopardy.
- Fund research, or commission an additional unit in the NAWS, to better document the incidence and cause of REI violations and current use of the REI exceptions.



## Personal Protective Equipment

---

- Encourage or require certification from the worker that their employer has provided them with properly fitting PPE and/or the worker has access to the employer-provided PPE they need at the facility.
- Encourage or require employers to make gloves and clothing storage and changing areas available to all workers.
- Provide regular grant funding for agricultural producers to purchase PPE for employees, along with outreach and education and technical assistance for PPE provision.
- Support research to develop effective auxiliary cooling system PPE, such as cooling garments, made from lighter materials that workers can wear comfortably in the heat without risking heat illness.
- Support research to examine the distinct PPE needs of women and minors.





## Decontamination Supplies

---

- Provide grant funding through the USDA to support development and implementation of carriers or devices that can better mobilize decontamination supplies, water and cups, and temperature-controlled food storage through the fields.
- Ensure that WPS training adequately and sensitively provides education concerning the importance of washing behaviors to reduce pesticide exposure, in a manner that respects the presently held beliefs of some workers concerning bodily health and safety.
- Guarantee workers compensated at a piece-rate wage receive at least the applicable minimum wage for all hours at work.
- Require workers to be compensated for breaks and non-productive time (e.g., washing, donning and doffing PPE) separate from their piece-rate compensation.



## Emergency Assistance

---

- Provide employers with pocket-sized cards that list pesticide illness/poisoning symptoms and supervisor and emergency medical services information for workers to carry with them (and present when receiving medical care).
- Train employers and supervisors to recognize pesticide exposure symptoms.
- Encourage or require employers to have and regularly test an emergency plan or an illness and injury prevention plan that details what to do in the event of a suspected pesticide exposure, including whom to call and how to transport employees to medical facilities.
- Require health centers that receive federal funding to maintain and provide information and resources concerning pesticide exposure, including risk mitigation, exposure and symptom recognition, rights and protections, treatment, and health risks.
- Expand resources for mobile health clinics so they are equipped to serve the diverse farmworker community.
- Encourage or require employers to provide workers compensation or compensate workers for time spent seeking medical attention and for recovery time for pesticide illness or injury.
- Provide grant funding and resources to support provider training on identifying and treating pesticide illness/poisoning and research that would help providers more quickly and accurately diagnose and treat patients.



## Shaping the Compliance Landscape

---

- Expand workers' compensation coverage for agricultural workers in all states.
- Amend the Federal Insecticide, Fungicide, and Rodenticide Act to provide stronger retaliation protections for workers (e.g., reinstatement, back pay, other damages).
- Establish confidentiality protections for workers reporting WPS violations.
- Amend the H-2A regulations to specifically refer to the WPS and its general provisions as program requirements that must be disclosed in the work contract.
- Amend the H-2A regulations to require additional disclosures and training regarding workers' rights and protections broadly, including the WPS.
- Amend the H-2A regulations to reduce isolation of workers by assuring that workers are allowed to have visitors at their housing locations, even if visits have to be limited to outdoor areas during a pandemic.
- Establish exit-interview procedures with H-2A workers that include inquiry into a grower's practices regarding pesticides and compliance with the WPS, with guaranteed confidentiality.
- Increase coordination and shared authorities among state inspection officials charged with enforcing laws related to workers on agricultural establishments (e.g., H-2A housing inspections and WPS compliance).
- Encourage grower participation in Worker-Driven Social Responsibility programs through incentives, procurement preferences, and education about the benefits these programs offer to workers and growers.
- Establish a federal floor protecting farmworker labor organizing that permits state law to go further and that does not preclude entry into or enforcement of supply chain agreements.
- Amend the regulation governing organic system plans to require growers to identify products that trigger WPS requirements and certify their understanding of their obligations under the WPS.
- Increase the EPA's outreach to organic growers, through collaboration with USDA, to ensure that organic growers are aware and informed of their responsibilities to comply with the WPS.
- Continue and increase funding for USDA's Organic Transition Initiative and cost-share programs to encourage organic transitions, while encouraging and promoting sound labor practices on organic farms.

## Authors

---

This report was produced by the Center for Agriculture and Food Systems at Vermont Law and Graduate School, the Harvard Law School Food Law and Policy Clinic, and Farmworker Justice. The lead authors of this report are Emma Scott and Gray Norton of the Harvard Law School Food Law and Policy Clinic, with Eric Sugarman and Hazel Spires, Summer Honors Interns with Center for Agriculture and Food Systems at Vermont Law and Graduate School, and Jenny Dorsey, Kyla Duffy, Chloe Dyer, and Kristi Tanaka, Clinical Students with the Harvard Law School Food Law and Policy Clinic.

The report was written in partnership with Laurie J. Beyranevand, Professor of Law and Director of the Center for Agriculture and Food Systems, Lihlani Skipper Nelson, Deputy Director and Senior Researcher, Center for Agriculture and Food Systems, and Mayra Reiter, Project Director, Occupational Safety and Health at Farmworker Justice, all of whom served as thought partners, editors, and reviewers.

## Acknowledgments

---

We thank the following people for reviewing this report: Renée AboAmshe, Program Manager, Migrant Clinicians Network; Becca Berkey, Director of Community-Engaged Teaching and Research, Northeastern University; Lisa Blecker, Pesticide Safety Educator, Colorado State University & Administrator, Pesticide Regulatory Education Program (PREP); Jeannie Economos, Coordinator, Pesticide Safety and Environmental Health Program, Farmworker Association of Florida; Anne Katten, Director, Pesticide + Worker Safety Project, California Rural Legal Assistance Foundation; Melanie Forti, Health & Safety Programs Director, Association of Farmworker Opportunity Programs; Andrés Kenney, New England Farmworker Attorney, Pine Tree Legal Assistance; Amy Tamayo, National Policy and Advocacy Director, and Mily Treviño Saucedo, Executive Director, Alianza Nacional de Campesinas.

Thanks also to the following individuals for speaking to us about their work: Alexis Luckey, Caitlin Ryland, David Morales, Derek Brinks, Edgar Franks, Kaci Buhl, Laurie Manning, Lisa Palumbo, Lynn Hamilton, Margaret Reeves, Mary Jo Dudley, Mike McCullough, Pat Farquhar, Phoebe Gooding, Roberto Rosales, Sara Quandt, Thomas Arcury, and those who wished to remain anonymous. Their generosity with their time and expertise greatly increased our understanding of the practices and dynamics at issue in this report.

**The reviewers and interviewees did not review the final document and do not necessarily agree with the report's arguments and recommendations but provided enormously thoughtful guidance and feedback on its content.**

This report would not have been possible without the tremendous editing, production, and communications support of Claire Hermann, Senior Communications Manager with the Center for Agriculture and Food Systems.

This report was made possible with support from the USDA's National Agricultural Library.

Finally, and most importantly, we express our sincere gratitude to the farmworkers across the country who put themselves and their families at risk to feed, nourish, and sustain us.

**To download the full report, go to [vermontlaw.edu/cafs](http://vermontlaw.edu/cafs).**



164 Chelsea St, PO Box 96  
South Royalton, VT 05068  
(802) 831-1000  
[vermontlaw.edu/cafs](http://vermontlaw.edu/cafs)