

SMOKE HAZARDS IN THE AGRICULTURAL WORKPLACE: A BILINGUAL SURVEY FOR AGRICULTURAL SUPERVISORS

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Challenge

Agricultural workers in Washington State are geographically and occupationally at elevated risk for increased days of exposure to hazardous concentrations of fine particulate matter from wildfire smoke. In 2024, WA State enacted a rule to protect outdoor workers from wildfire smoke.

Project Overview

Bilingual personnel administered a survey to agricultural supervisors and crew chiefs at two industry trainings in Washington State. A total of 116 surveys were collected with 61% completed in Spanish. The purpose of this study was to:

- 1) Explore perceptions of air quality (AQ) monitoring, hazard communication, health impacts of smoke exposure, protective controls, and training needs among agricultural supervisors in alignment with the major elements of the wildfire smoke rule, and,
- 2) Compare survey responses by the language in which the survey was completed to identify training needs by group.



Figure 1: Surveying workers. Ag Safety Day 2024, Yakima, WA

Key Findings



**NEARLY 20%
HAVE CONDITIONS
OF HEART AND LUNGS.**



**ONLY 63% TRAINED
TO MANAGE WORKERS WITH
SMOKE-RELATED SYMPTOMS.**

- Eighty percent of respondents agreed that they have been exposed to wildfire smoke at work and 77% reported that they supervised workers who have been exposed.
- Most (81%) respondents agreed that they can recognize signs/symptoms when a worker is not feeling well due to smoke exposure but only 63% reported having had training on managing workers with smoke-related symptoms.
- A significantly greater proportion of completers in Spanish (90%) reported being concerned with their own health and their workers' health in relation to smoke exposure than those completing in English (64%).
- N95 masks were identified as readily available and the most realistic option to protect workers when wildfire smoke is present.
- There were significant differences by language group regarding what resources respondents identified as accurate for monitoring AQ at work.
- Most respondents (79%) had heard of the wildfire smoke rule.

“... The key to addressing smoke and heat problems successfully, and minimizing the risk to employees, is to have very **aware supervisors** and people who are encouraged to ... engage employees and say, ‘hey, **are you sure you’re doing okay?**’”

- Ag industry stakeholder*

Next Steps

Wildfire smoke is an occupational health threat for outdoors workers that is expected to increase. Supervisors who work in agricultural workplaces are required by law in WA, OR and CA to monitor AQ, manage workers' symptoms and implement protective controls at certain AQ thresholds. Study findings identify gaps in these areas and will support ongoing training of a critical subsector of the WA State agricultural workforce.

* Parker, M., Graves, J., James, L., Postma, J. (Accepted 12/23/2024). Agricultural Employer Perspectives on Occupational Wildfire Smoke Rules. Journal of Agromedicine. Manuscript ID WAGR-2024-0120.R1