



PACIFIC NORTHWEST AGRICULTURAL SAFETY AND HEALTH (PNASH) CENTER

fishing • farming • forestry



RESEARCH FOR

Healthy Workers, Strong Communities & Productive Agriculture

The Pacific Northwest Agricultural Safety and Health (PNASH) Center, established in 1996 through the NIOSH/CDC Agricultural Initiative, is dedicated to the prevention of illness and injury among agricultural producers, workers and their families. We work toward this goal through partnerships in the Northwest (Alaska, Idaho, Oregon, and Washington). Agricultural businesses, workers, and communities are the foundation of a strong agricultural industry. With this in mind, we partner with industry, health care, government, academic, and community groups to address key hazards and promote safe and sustainable workplaces.

RESEARCH

Heat Exposure, Injury Risk, and Productivity in Agricultural Workers (NIOSH 2014-2017)

This project aims to examine the association between heat exposure and traumatic injury risk in agricultural workers, the relationship between heat stress and productivity, and the feasibility of using a biomarker of heat acclimation to detect workers at risk for heat-related illness (HRI) and injury.

Farmworker OP Exposure through Protein Adducts (NIOSH 2011-2016)

Our previous work developed an assay that provides greater sensitivity and specificity as compared to traditional ChE monitoring - eliminating the need for collection of a baseline pre-exposure blood sample from each worker. We are expanding this assay to provide a more complete understanding of worker exposures to a wide range of OP pesticides and are developing it for use in field and clinical settings, to provide rapid feedback to workers, clinicians, and physicians.

Using IPM to Reduce Pyrethroid Pesticide Exposures in Dairy Workers (NIOSH 2011-2016)

This five-year project partners with WSU to reduce pesticide use in dairy operations by introducing IPM practices in these workplaces. We are working with a network of participants to develop a robust and practical IPM program that provides evidence for cost-effective interventions that can reduce pesticide usage in their farm operations.

Pilot: Non-Fatal Injuries among Commercial Fishing Workers in Alaska, Washington, and Oregon

(PNASH Small Grant 2014-2016) Commercial fishing is the most hazardous occupation in the United States. This descriptive epidemiological study will provide estimates of the reported non-fatal occupational injuries among commercial fishermen, describe high-risk work processes, and identify vulnerable populations, such as young workers.

Pilot: Transmission of Microorganisms in Dairy Farms (PNASH Small Grant 2013-2016)

Dairy farming requires close contact between people and animals. Transmissions between the two can become a source of zoonotic disease. In this small pilot a multidisciplinary team is conducting a survey of work practices to provide insight into modifiable risk factors for microbial transmission with implications for the health of workers, dairy cows and the environment through a "One Health" model.

Pilot: Injury & Illness Surveillance in the Pacific Northwest for the Dairy Industry (PNASH Small Grant 2015-2016)

This project will lay the groundwork for an ongoing system for surveillance of injury and illness within the Pacific Northwest Region. The surveillance system will allow PNASH and others to identify research and education needs to reduce injury and illnesses in the industry and to measure the effectiveness of implemented interventions over time.

PREVENTION AND INTERVENTION

Safety and Health of Latino Immigrant Forestry Services Workers in the Pacific Northwest (NIOSH 2014-2017)

This research-to-practice project is identifying and assessing injury and health risks for Latino immigrant forestry services workers in order to create story-telling based education and prevention materials aimed to reduce risks for workers. The project partnership includes the Northwest Forest Worker Center, Berkeley Labor Center and UW PNASH.

Reducing Agricultural Worker Risks through New and Emerging Technologies (NIOSH 2011-2016, MAAF 2012-2013)

PNASH researchers are evaluating interventions designed to reduce worker exposure and risk during pesticide applications in tree fruit. This project works with land grant universities, industry, producers, and workers to ensure that the decision process used for adopting new pesticide products and new spray technology development includes worker health and safety.

Ergonomic Evaluation and Development of Best Practices for the Use of Mobile Work Platform Technology in Orchards

(WA State MAAF 2009-2011, NIOSH 2012-2016) Technological advancement is important to American agriculture and will continue to transform work practices and equipment. The PNASH Center is working with the tree fruit industry to develop safety measures for mobile work platforms to prevent potential hazards.

Impact of Workplace Stress on Health in Farmworker Families (NIOSH 2014-2016)

This project addresses stress experienced by agriculture workers and their families. Findings will lead to the development of practical workplace intervention strategies designed to reduce stress. An intervention program aimed at employees, as well as one aimed at supervisors, will be developed using existing intervention study research.

Pilot: Total Worker Health in Salmon Fishermen from Cordova, AK (PNASH Small Grant 2014-2016)

This project is identifying chronic health risks associated with fishing in order to develop “total worker health” best practices. Building on partnerships between the UW, NIOSH – Alaska Pacific Office, and University of Alaska Fairbanks Sea Grant program, this pilot project is creating a new health risk appraisal tool and exam protocol for fishermen and clinicians.

EDUCATION

Pesticide Safety in Tree Fruit: Translating Research, Overcoming Barriers (NIOSH 2011-2016) Our goal is to minimize worker and family pesticide exposure in the tree fruit industry by translating and disseminating research results and overcoming barriers to pesticide safety practices. By providing access to information and solutions, orchard owners, managers, and handlers will be better equipped to protect workers from pesticide exposure and illness.

GRAS²P Food Safety Video (PNASH Small Grant 2013-2016) This project is integrating current pesticide safety standards into the video: Fieldworker Orientation & Food Safety/Orientation para el Trabajador Agricola y Seguridad Alimenticia. It will be used by growers and workers in WA and across the US to insure effective food safety practices. This product is being developed by the Washington State Tree Fruit Association and local partners under the program GRAS²P (Growers Response to Agriculture, Safe & Sustainable Practices).

Agricultural Medicine eLearning Series for Mid-Level Health Care Providers (PNASH Small Grants 2015-2016) This project will develop a pilot self-paced OEM e-Learning Series targeting physician assistant & nurse practitioner students to improve their ability to recognize, diagnose, treat, prevent and provide patient education pertaining to occupational injuries and illnesses in the agricultural community.

COMMUNITY-BASED PARTICIPATORY RESEARCH

El Proyecto Bienestar (or, Well Being Project), is a long standing community health intervention effort guided by a Yakima Valley community advisory board and a partnership of: The University of Washington; Northwest Communities Education Center/Radio KDNA; Heritage University; Yakima Valley Farm Workers Clinic. Our current Proyecto Bienestar projects:

Home Air in Agriculture - Pediatric Intervention (HAPI) Trial (NIEHS 2014-2019) This study is addressing three highly underdeveloped components of asthma and environmental research - the health of children with asthma living in communities with industrial scale agricultural operations, asthma in a particularly vulnerable subpopulation (Latino farm worker children), and evidence based intervention strategies within these populations. HAPI aims to reduce child exposure to inflammatory agents and allergens in the home through the use of high efficiency particulate air cleaners and a home-based education program.

Health & Safety of Women Ag Workers (MAAF 2013-2014), PNASH Small Grant (2015-2016), El Proyecto Bienestar is addressing sexual harassment of women working in agriculture. EPB, along with a community advisory board, is assessing the extent and interrelationship between sexual harassment and worker health. This project will develop key resources toward the elimination of sexual harassment as an occupation health hazard in the Washington agricultural workforce. The projects main objective is to produce a sexual harassment prevention training video and curriculum specifically for agricultural growers and workers.

PNASH EDUCATIONAL RESOURCES

NIOSH Ag Centers YouTube Channel ➔ <https://www.youtube.com/user/USagCenters>

View PNASH’s ladder safety and heat illness prevention videos, as well as videos produced by other NIOSH Ag Centers! (English/Spanish)

Practical Solutions for Pesticide Safety ➔ http://depts.washington.edu/pnash/practical_solutions

The Practical Solutions for Pesticide Safety guide is a collection of 24 solutions and ideas identified on farms and developed in partnership with farmers, educators and researchers in Washington state. (English/Spanish)

Fluorescent Tracer Training Hands on Learning for Pesticides ➔ http://depts.washington.edu/pnash/fluorescent_tracer

Pesticide safety trainers find the fluorescent tracer (FT) to be a powerful tool for mimicking pesticide contamination and helping workers self-evaluate their practices and protective equipment. Available are the FT kit, manual and video. (English/Spanish)

Nurse Murf/Enfermera Elena ➔ http://depts.washington.edu/pnash/nurse_murf

Nurse Murf is a syndicated column sharing medical and safety information for those that work in farming. (English/Spanish)

Northwest Forest Worker Safety Review (2002 – Present) ➔ http://depts.washington.edu/pnash/forestsafety_news

This annual newsletter for forestry and safety practitioners shares a vision of a healthier and safer Northwest forestry industry.

Audio Library - Listen and Learn! - Audio Biblioteca - ¡Escuche y Aprenda! ➔ http://depts.washington.edu/pnash/audio_library

Four educational audio programs use the power of storytelling to inspire workers and farmers to stay safe. Program formats include real life-changing injury stories from farmers and workers and novella series dramatizations.