UCDAVIS Western Center for Agricultural Health and Safety



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Table of Contents

Center Summary	4
Section 1: Evaluation and Planning Core	5
WCAHS Retreat	6
EAB Meeting	7
Seminar Series	8
Emerging Issues	9
Collaborations	10
External Funding	11
Section 2: Research Core	12
Core Research	13
Pilot/Feasibility Projects	18
Section 3: Outreach Core	20
Trainings	21
Outreach Events	22
Pláticas	23
Resource Development	24
Looking Forward	27





CENTER SUMMARY

The western region is one of the nation's most intensive and productive with nearly 89,000 farms and ranches and close to one million workers in Arizona, California, Hawaii, and Nevada combined. In addition, western agriculture is characterized by specialty crops, labor intensive work, and an incredible diversity of commodities.



Over its more than 30-year history, WCAHS has developed a comprehensive, multidisciplinary program dedicated to the understanding and prevention of illness and injury in Arizona, California, Hawaii, and Nevada. As one of the most hazardous occupations in the US, WCAHS has a direct public health impact by increasing the understanding of what causes injuries and illnesses in farmworkers in the West and by translating research findings, policy recommendations, and regulatory requirements into practical solutions for adoption in the field.

WCAHS Addresses Common Ag Issues:





Wildfire smoke

Pesticide exposure





ATV injuries

Heat-related illness





Zoonotic disease

Workers' rights







Wellness



SECTION ONE

EVALUATION AND PLANNING CORE

The center's Evaluation and Planning Core has a hand in all center activities and achievements. In the 2023–2024 grant period, this core's highlights have been the success of the Seminar Series for inclusively communicating important center research, in-person WCAHS meetings, and the Emerging Issues Program that addresses a community need.



WCAHS RETREAT

In October 2023, WCAHS held a center-wide retreat at Putah Creek Lodge on the University of California, Davis main campus. The goals of the retreat were to 1) promote a sense of community and give center members an opportunity to get to know one another and 2) equip all investigators and staff as center ambassadors by building project and program literacy.

Investigators, outreach, communications, and evaluation staff gave presentations on their respective research, center role, and proposed collaborations. Presentations were followed by time for questions and tabling to share resources.



A selection of the handouts provided at the WCAHS retreat.

As a result of the connections facilitated by the center-wide retreat, the outreach team reached out to center investigators, Drs. Crystal Yang and Xunde Li, regarding avian influenza in dairy cows (see page 25 for more information).



WCAHS PIs, students, and staff at the WCAHS retreat in the Putah Creek Lodge.





On June 4, 2024, WCAHS hosted an in-person meeting at the University of California, Davis Conference Center that convened External Advisory Board (EAB) members, center investigators, and staff. The goals of the meeting were to 1) familiarize new EAB members with the center's strategic goals and 2) discuss emerging issues.



WCAHS PIs, staff, and EAB members at the in-person EAB meeting.

Roundtable discussion on emerging issues brought up the following topics: workplace violence, transportation safety, indoor heat illness prevention, avian influenza, sustainable pest management, data access, and small farm adaptable technologies. This discussion is guiding current work in the center. For example, we have written an article and hosted presentations on workplace violence. WCAHS also has an outreach campaign currently ongoing related to avian influenza (see page 25).

The EAB meeting culminated with a celebration of the WCAHS Director's, Dr. Kent Pinkerton, retirement as well as the introduction of the new WCAHS Director, Dr. Fadi Fathallah (see page 27).

EAB Member Affiliations

- Farm owners
- Community-based
 organizations
- Farmworker advocates
- Academics
- Government officials
- Cooperative extension
 specialists



The WCAHS Seminar Series is held online every month from October to June each year. WCAHS is committed to providing live Spanish interpretation during the seminar events, increasing equity and attendance among our partners.

1,2000 Total Live Attendance & YouTube Viewership



Number of Seminars in 2023–2024

Topics presented at the 2023–2024 academic year Seminar Series included mitigating climateintensified exposure, heat illness prevention in polytunnels, California's new overtime law, and more.

To capture additional interest from those who may not be able to attend virtually, the Seminar Series talks are recorded and shared on YouTube in both English and Spanish. Scan the QR code below to visit our seminar series playlist on YouTube.







The Emerging Issues Program is designed to deftly respond to new and unexpected safety concerns. The selected Emerging Issues project for 2023–2024 was to create outreach kits for two of the agricultural communities that we work with: 1) community-based organizations (CBOs) and 2) farmworkers. These kits were inspired by outreach kits that are distributed by other NIOSH centers, but we have tailored our kits to be specific to the communities that we frequently work with.

Farmworker Outreach Kit

The farmworker outreach kit consists of the following materials: a drawstring backpack, a bandana, a water bottle, a first aid kit, sunscreen, N95 masks with our respirator pocket card, hand sanitizer, a sun hat, and print materials such as a sexual harassment prevention accordion and heat illness prevention accordion. The farmworker outreach kits will be distributed by our staff at events such as health fairs and safety trainings.



CBO Outreach Kit

The CBO outreach kit consists of the following materials: a backpack, a writing portfolio, pens, sun hat, water bottle, hand sanitizer, and a safety alarm. WCAHS will distribute the outreach kits during our in-person meetings with CBO personnel including at our regional meetings.





A selection of the materials that are included in outreach kits.



COLLABORATION WITH OTHER CENTERS

In addition to attending and contributing at director, evaluation, and communications meetings with all centers, WCAHS has collaborated with other NIOSH agricultural centers. Selected collaborations are described below.

National Farmworker Health and Safety Week

WCAHS participated in this year's National Farmworker Health and Safety week from September 15-21. Center staff posted health and safety materials relevant to farmworkers in the region that were created by WCAHS and other NIOSH centers.

Collaboration with HICAHS

WCAHS shared heat illness prevention educational resources and training materials with the High Plains Intermountain Center for Agricultural Health and Safety (HICAHS). WCAHS and HICAHS plan to co-evaluate the effectiveness of the resources and materials.

Department of Health and Human Services one-pager

NIOSH Agricultural Centers were given an opportunity to provide an overview of their heat illness and wildfire smoke exposure prevention research and outreach activities. WCAHS and other centers prepared a highlevel overview and presented it to a United States Department of Health and Human Services task force.



One of the resources shared during #NFSHW24.



A one-pager for the Department of Health and Human Services.



WCAHS has been successful at gaining additional funding to extend the reach and impact of the center overall. Below, we highlight select grants and contracts.



Farmworker Housing Study

PI: Heather Riden, Timothy Beatty, Deborah Bennett

The farmworker housing study will provide data to inform policy and housing development decisions to improve farmworker living conditions and increase the availability of affordable housing in California. This project is funded by the State of California and administered by the Department of Housing and Community Development. WCAHS is partnering with the California Coalition for Rural Housing to conduct the study.



Frontline Supervisor Training Program

PI: Heather Riden

Frontline supervisors are responsible for overseeing the daily performance of workers; however, there are limited training opportunities available to this group. WCAHS is offering a training to support frontline supervisors with taking a leadership role in health and safety in the workplace. The Frontline Supervisor Training program is funded by the U.S. Department of Agriculture Agricultural Marketing Service.



The Effects of Smoke from Wildfire and Agricultural Burning on Farmworker Behavior and Health Outcomes Pl: Timothy Beatty

This study will investigate the impact of smoke from wildfires and agricultural burning on farmworker labor supply and health outcomes. It will use novel location data from a company collecting information from smartphone applications, offering unprecedented detail in labor supply analysis and comprehensive health data from Workers' Compensation Information System. This research is supported by a NIFA grant through the AFRI Program.



The Effects of Wildfire Exposure on Maternal Allergic Asthma and Consequences on Neurobiology

PI: Paul Ashwood, Kent Pinkerton

Genetics contribute to autism spectrum disorders, but there is also a link with maternal allergic asthma. Wildfire smoke exposure can exacerbate maternal allergic asthma, but it is unknown if allergic asthma induced by wildfire smoke impacts the neurobiology of the fetus. This research will investigate immune mechanisms related to allergic asthma induced by wildfire smoke and the link with autism. This research is funded by the NIH.



SECTION TWO

RESEARCH CORE

WCAHS has a strong research program consisting of five core projects as well as annually funded seed projects known as the Pilot/Feasibility Program. All research projects and Pilot/Feasibility projects are described in the following pages.



Assessing the impact of co-exposure to agricultural wildfire emissions on California farmworker health

PI Project 1: Kent Pinkerton, Ph.D.

It is evident that wildfires will be the primary driver of air quality over the coming decades due to climate change. Even regions not historically susceptible to wildfire are burning. Thus, it is essential to understand the health effects of exposure to wildfire emissions. This is especially true for California farmworkers given they work outdoors for extended periods.

This past year, Dr. Kent Pinkerton and co-investigators Drs. Keith Bein and Christoph Vogel, collected wildfire smoke measurements adjacent to a major freeway system to understand the dual impact of wildfire and vehicular emissions. They found that wildfire smoke is masked by vehicle emissions since these emissions are saturating the signal for ultrafine particulate matter (PM). However, wildfire signal was detected when reading the surface area concentration rather than the particle size. This is significant to farmworker health because there is a direct correlation between particle surface area and adverse health outcomes.

In addition, this project is investigating the mechanisms underlying non-Hodgkin's lymphoma development in wildfire exposed populations. To investigate this, research animals were chronically exposed to real-world wildfire PM samples. The animals were then subjected to whole body PET/CT scans to identify enlarged lymph nodes and markers of lymphoma.

In the next year, physicochemical characterization of wildfire and agricultural emissions will continue in parallel to these toxicological studies to identify reliable exposure metrics and quantify farmworker exposure profiles.



Wildfire PM exposed mice

Preliminary results are shown for both the negative controls and wildfire exposed animals and clearly indicate a premalignant state in the lymph nodes of wildfire exposed animals but not the negative controls. This is a remarkable finding that has not previously been reported.



Promoting translation and addressing hurdles to adoption for biosolarization as an alternative to soil fumigation to decrease worker exposure to toxicants PI Project 2: Christopher Simmons, Ph.D.

Soil fumigants are a class of pesticides used to control weeds, pathogens, and parasitic pests. However, many conventional and widely used soil fumigants have been identified as toxic and/or possibly carcinogenic. Acute and chronic exposure risks may include irritation to the eyes, skin, and respiratory system, as well as nausea, vomiting, increased risk of certain cancers, and in extreme cases, death. **Despite the known dangers, soil fumigants are still widely used across several major western crops.**

Dr. Christopher Simmons' research focuses on the efficacy and safety benefits of a novel pest management technology—biosolarization—relative to conventional soil fumigants. Biosolarization uses a combination of passive solar heating and microbial fermentation in the soil to inactivate soil pests.

This past year, Dr. Simmons and his team conducted a biosolarization field trial in collaboration with the University of Arizona. This trial demonstrated the viability of using date processing residues as an amendment for biosolarization in desert agriculture. Biosolarized plots showed increased lettuce yield and decreased disease frequency compared to plants grown in solarized or untreated soils.

In addition, laboratory biosolarization studies showed robust control of tubers from yellow and purple nutsedge, two of the most noxious weeds in western agriculture. This complements prior data showing control of nematodes and pathogens to position biosolarization as a broad spectrum soil pest control technique.

In the coming year, Dr. Simmons's research will will focus on developing biosolarization strategies to control the plant pathogen *Pythium ultimum*, a major pest for carrots and other western crops.



Field with lettuce growing in soil that was not biosolarized (Left) vs. field with lettuce growing in soil that was biosolarized (Right).



Agricultural all-terrain vehicle safety

PI Project 3: Farzaneh Khorsandi, Ph.D.

All-terrain vehicles (ATVs)—off-road, motorized vehicles with three or four tires—are commonly used by farmers to apply fertilizers, inspect livestock or crops, and carry or tow implements. The instability of ATVs can lead to rollover incidents, which are dangerous and sometimes fatal. Deaths related to the use of ATVs on farms occur yearly in the US.

ATV incidents are the second-leading cause of injuries and deaths in US agriculture, with about 190 injuries or deaths in a year.

Dr. Farzaneh Khorsandi is thus evaluating the stability of agricultural ATVs and determining the operation and safety performance of engineering controls, such as crush protection devices, to prevent serious injuries and deadly outcomes in the case of rollover incidents.

This past year, Dr. Khorsandi and the research team finalized the ATV static stability experiments and associated data analysis. Two manuscripts are currently being prepared based on these findings. In addition, the ATV dynamic stability experimental tests have been set up.

In the coming year, Dr. Khorsandi will finalize both the ATV dynamic stability experiment and the ATV rollover crash test as well as conduct the associated data analyses.





A total of eight presentations and four papers have resulted from this study (two papers published; one in press; one submitted).



ATV fitted with 95th percentile adult male test manikin and a sprayer tank filled with water during a static stability test.



Assessing the occupational exposure of farmworkers to antibiotic resistant bacteria in dairy production

PI Project 4: Xiang (Crystal) Yang, Ph.D.

Antibiotics are commonly used in animal agriculture to control, prevent, or treat diseases. However, their long-term use can increase selection pressure, leading to the development of antimicrobial resistant bacteria. Due to the widespread use of antibiotics in dairy production, there is a concern that antibiotic use in animal agriculture contributes to antimicrobial resistance in farmworkers who are exposed to antimicrobial resistant bacteria.

This research aims to assess the occupational risk of antimicrobial resistance in dairy farmworkers using metagenomics and network analysis. Metagenomics is an approach to investigate the structure and function of the DNA sequences of a microbial community. By defining the occupational tasks with a high risk of exposure to antimicrobial resistant bacteria, the study will lay the groundwork for effective safety interventions.

Dr. Yang and her research team recruited 10 dairy farms from California to participate in this project. They collected 241 samples during summer 2024. Questionnaires at both the farmworker and the farm management levels were administered. Across all environmental samples, the prevalence of *E. coli* and *Salmonella* were 72.61% and 19.09%, respectively. *Salmonella* prevalence in the environment samples varied among farms, indicating that the prevalence and spread of pathogens are likely associated with farm management practices.

Among farmworkers, swab samples from outerwear and shoes showed the highest prevalence of *E. coli* and *Salmonella. E. coli* was detected in nine nasal swab samples, and *Salmonella* was found in one nasal swab sample. This suggests that farmworkers may be exposed to fecal indicator bacteria from the farm environment.

In the next year, Dr. Yang will continue sample collection. After collection, all samples will be processed for bacterial enumeration, pathogen and indicator bacteria isolation, and antimicrobial susceptibility testing to gather phenotypic data. In addition, the team will extract microbial DNA and perform a bioinformatics analysis to characterize genotypic profiles. They will also conduct a preliminary analysis to assess occupational risks.



Sampling from outwear being conducted at a dairy farm in California.



Continuous surveillance of agricultural workers' occupational health and injuries

PI Project 5: Timothy Beatty, Ph.D.

Agricultural work consistently ranks among the most dangerous occupations in the US. However, existing data on occupational injuries dramatically understate the true burden of nonfatal injuries in the agricultural industry. In addition, surveillance of agricultural injuries is often reported at too broad a scale to efficiently allocate resources, set policy priorities, and target prevention activities and interventions.

With a focus on the western states of Arizona, California, Hawaii, and Nevada, Dr. Timothy Beatty's research will do more with the available data. The study will build a free dashboard to provide comprehensive data and biannual reports on occupational injuries in agriculture.

In the past year, Dr. Beatty and his team developed industry-specific large language models (LLMs) to automate the coding of occupational health data, integrating narrative accident reports with sector-specific classifications. In addition, the research team enhanced the LLM's privacy for publicly available occupational health data with four field inputs. The team has drafted a paper on this new technique, highlighting that it is more efficient, without sacrificing accuracy, than current methods for classifying occupational injuries and illnesses.

Once the research team obtains access to the California Workers Compensation data and updated private insurance data, they will update and tailor the LLM to find nuances in accident reports, worker characteristics, and farming practices to improve our understanding of the links between specific agricultural practices, equipment, and farm environments with worker health and safety. In addition, the the research team will develop a prototype data dashboard using a combination of publicly available data and workers compensation data on worker injuries and illnesses in the western states. They will use the assembled data and the output from the LLM to explore key research questions related to causes of worker injuries and illnesses. The aim is to have a working paper related to at least one of: heat, pollution, or employer size.



Farmworker in California. Photo from CAES.



2023–2024 PILOT/FEASIBILITY AWARDEES

WCAHS' Pilot/Feasibility Program funds small-scale research projects to promote data collection and pilot projects with a focus on early stage investigators and new topics in agricultural health and safety. WCAHS also uses the program to expand its work in Arizona, Hawaii, and Nevada. For 2023-2024, WCAHS funded five Pilot/Feasibility projects. The projects are described briefly below.



Evaluation of retired farmworkers' health and healthcare access in California Nancy Burke and Alanna Bares, University of California, Merced

California farmworkers are retiring with limited or no social and economic support. Little is known about the impetus for retirement or impacts of occupational health exposures. We will conduct interviews with retired farmworkers to explore the understanding of and links to health conditions, reasons for retirement, support, and resources available. Findings will serve as the foundation for medical provider trainings and a clinical assessment tool to be developed and evaluated in future research. Findings will benefit state agencies poised to protect the health of all Californians, including senior farmworkers.



Exposure to hazardous noise during common agricultural activities Laura Coco, San Diego State University

Noise induced hearing loss (NIHL) is the most common occupational injury across all industries. It is both permanent and completely preventable. In addition to hearing loss, continuous exposure to noise can lead to high blood pressure, bothersome tinnitus, stress, and a greater risk for injuries due to missing auditory safety cues. Agriculture generates high noise levels, putting farmworkers at risk for NIHL. However, there is a lack of research on noise exposures among farmworkers in the southwestern United States. Therefore, this study will measure noise exposure associated with common agricultural tasks, such as operating farm machinery, among farmworkers in this region.





Real-time detection of intervertebral disc changes related to lower back pain Lena Nguyen, University of California, Davis

In California, incidents of lower back pain within the agricultural sector are elevated due to the demanding conditions that place workers in ergonomically unfavorable postures. Often with chronic back pain, there are critical spinal changes that occur. Unfortunately, monitoring these changes is a lengthy process that makes preventable measures difficult to implement. This proposal offers a viable alternative to monitoring spinal discs in real time using ultrasound imaging. With the acquired images, assessments can aid in implementing interventions to curb further degeneration of spinal discs and ensure that work is more ergonomically favorable.



Wildfire smoke exposure during COVID-19 vaccinations impairs immunity Gursharan Kaur Sanghar, University of California, Davis

Smoke impacts outdoor agricultural workers by having both short- and long-term health impacts as well as increasing susceptibility to COVID-19. In the peak of the 2020 pandemic, 10 California counties found that wildfires were associated with increased COVID-19 infections. However, it is unknown whether exposure to wildfire smoke impacts immunity gained from the COVID-19 vaccine. Initial findings demonstrated that receiving vaccination during wildfire smoke exposures decreases the level of immune protection. We aim to investigate the role of immune cells in mediating the effects of wildfire smoke on protective immunoglobulin production. This study will aid efforts to improve vaccine effectiveness.



Occupational risks from Shiga toxin-producing E. coli infection Xiaohong Wei, University of California, Davis

Shiga toxin-producing *E. coli* (STEC) causes severe foodborne illnesses in humans. Cattle are the primary reservoir for STEC, and food or water contaminated with cattle feces is the most common source of infections in humans. Cow–calf ranches often share habitats with wildlife, potentially influencing STEC prevalence and transmission. This study will assess the risk posed by STEC from cow–calf and wildlife feces to ranch workers while conducting risk assessment and investigating gene diversity. The research will provide insights into STEC interactions between domestic cattle and wildlife, informing strategies to protect livestock owner's and worker's health and safety.



SECTION THREE

OUTREACH CORE

WCAHS is dedicated to improving the health and safety of those working in western agricultural by translating scientific research into educational resources and trainings for the agricultural community. Outreach staff travel throughout the western states to deliver inperson trainings, attend community events, and build relationships.



WCAHS' education and outreach specialists provide interactive trainings at no cost on topics essential to staying safe and healthy while working in labor-intensive western agriculture. Agricultural workers in the West predominately speak Spanish; therefore, trainings and associated print materials are offered in English and Spanish.

Selected popular trainings include:



The Wildfire Smoke Exposure Training provides resources on wildfire smoke exposure for both employers and employees. WCAHS offers trainings for agricultural employers and employees that provide a more comprehensive and in-depth review of the health effects of wildfire smoke exposure, worker protection procedures, and more. We also offer train-the-trainer sessions for community leaders.



Our Heat Illness Prevention Training incorporates participatory adult education methods and provides important background information to understand the impact of heat on human health. The training emphasizes rights and what to do before, after, and during work hours to reduce their risk of heat illness.



Teresa Andrews giving a training.



The Pesticide Safety Training provides general pesticide safety information including what is a pesticide, different types of pesticides, and active ingredients. We then describe the symptoms of illness, what causes them, and good hygiene practices to limit pesticide exposure.



OUTREACH EVENTS

In addition to conducting trainings, WCAHS outreach staff attended events across California to provide health and safety information to farmworkers and farmworker families. Here, we highlight two events that we attended.

Tabling

WCAHS outreach staff attended the Dia de la Familia event in Santa Maria hosted by the California Farmworker Foundation. WCAHS provided center resources to community leaders, CBO staff, and promotores on climate change, paid sick leave, heat illness, and air quality/wildfires. In addition, we conducted surveys for the California Farmworker Housing Study.

Presentations

WCAHS staff gave successful presentations during the Conferencia Campesina organized by Comite Civico del Valle. The presentations focused on how theater is an effective tool to increase awareness and create discussion about issues affecting under-privileged communities. Another WCAHS activity at the event was focused on stress-relief through stretching and dancing. In addition, WCAHS staff presented on heat illness prevention.



WCAHS team members, Yajaira Ramirez Sigala, Claudia Escobar, Josselyn Aguayo, and Esperanza Salazar, at the Dia de la Familia event in Santa Maria.





Stress-relief event at the Conferencia Campesina.



WCAHS developed Pláticas en Confianza (Conversations in Trust, Pláticas) in May 2021 as a way to convene virtually during COVID-19. With content oriented towards community-based organizations, Pláticas are structured differently from a standard presentation in that an expert provides a brief, 15-minute presentation with 45 minutes reserved for questions and discussion. This gives attendees more time to engage directly with the expert and creates greater opportunities for listening and connection.



This year, Pláticas was expanded thanks to external funding provided by Health Net. Sessions covered topics such as mental health, Medi-Cal expansion, heat illness, paid sick leave, public charge, wage and hour, and bird flu.

In addition to virtual Pláticas sessions, WCAHS held regional meetings. Regional meetings were an in-person continuation of the virtual Pláticas sessions that brought together local experts and community leaders for one day. Regional meetings emerged from community partners' desire for in-person collaboration and connection. These in-person meetings facilitated 1) building and strengthening relationships among local community leaders and experts in the region and 2) strengthening the understanding of mental and behavioral health topics affecting farmworker communities.



Two of the five safety messages developed in partnership with Pláticas and regional meeting participants.



RESOURCE DEVELOPMENT AND DISSEMINATION

WCAHS serves as a critical and trusted hub for the creation and dissemination of important print and digital resources. Our experience working with everyone in agricultural has shown that farmworkers, community-based organizations, and employers respond best to distinct resources tailored specifically to them. Therefore, we reach different groups in agriculture with varied resource types and avenues.

However, for all audiences, we use the same resource development process: 1. topic identification and needs assessment; 2. internal resource development; 3. partner review; 4. resource refinement and additional partner review; 5. agency review (when applicable), and 6. resource dissemination.

On the following pages, we outline some of the print and digital resources that WCAHS has developed and/or disseminated during the 2023-2024 fiscal year.



WCAHS team member Fani Villanueva distributing print outreach materials..

>301,000 Total print materials distributed in Year 2



WCAHS distributed over 41,000 heat illness accordions in 2023-2024.

Avian influenza

Influenced by the detection of avian influenza in dairy cattle in the Midwest and subsequent infections in humans, WCAHS responded by creating resources to inform farmworkers, community-based organizations, supervisors, and employers about the risk of infection to those working with sick or dead animals.

Our first avian influenza resource published on May 9, was a news article titled, "Limiting Farmworker Exposure to Bird Flu." This article is written in English and Spanish for an eighth to ninth grade reading level and included links to further illustrated resources from UC Davis and CDC. This article has been added to Cal/OSHA's bird flu resources page.



Scan the QR code above to read our bird flu article.

To reach an audience of farmworkers who are not our primary website audience and who may have lower literacy, we created and digitally distributed a series of three safety messages. Safety messages are 5-inch by 5-inch digital, and sometimes print, highly illustrative resources that share important information using limited text. Our safety messages include basic information about bird flu, PPE for milking parlors, and a non-judgmental explanation of raw and pasteurized milk.







Safety messages designed for farmworkers and farmworker families about bird flu. Safety messages are designed to be illustrative and have a reading level suitable for the target audience.

To further suport the dairy community, we partnered with co-PI Dr. Xunde Li (Project 5) to distribute face shields, N95 respirators, and respirator pocket cards to dairies in central California. Dr. Li distributed over 400 of these resource packs.

Avian influenza was detected in dairy cattle in California on August 30. Our resource development, distribution, and outreach will continue during the coming fiscal year.



Workers' Rights

With a focus in California, WCAHS creates resources for farmworkers, CBOs, and agricultural employers about their respective rights and responsibilities. For example, we created several different resources about California paid sick leave to inform both workers and employers of the important update to this right. These resources have gone through edits from our team, partners, and relevant agencies.

Resources for paid sick leave include an update to a set of previous 5-inch by 5-inch safety messages, which were shared both digitally and in print. To facilitate printing and sharing of this resource, we then created a half-page document with more in-depth information than the safety messages. The half-page document is printed two-sided to allow for both English and Spanish on the same resource. These have been shared broadly with community organizations and agricultural employers statewide.

In addition, we have provided more extensive information about the different leave options available to workers in California in an article titled, "How to Take Leave from Work in California." In addition to paid sick leave, this article describes disability insurance, workers' compensation, paid family leave, and more.



Scan here to read the full article titled, "How to Take Leave from Work in California." <section-header><section-header><section-header><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item>

Safety messages designed to educate farmworkers about California Paid Sick Leave.



WCAHS distributed over 54,000 half-page California Paid Sick Leave fliers in 2023-2024.



The Director of WCAHS, Dr. Kent Pinkerton (Project 1), is retiring. WCAHS has been privileged to have Dr. Pinkerton as the Director of WCAHS since 2017, when he took over for the Founding Director, Dr. Marc Schenker. Prior to becoming Director of WCAHS, Dr. Pinkerton served as the Associate Director of WCAHS for 15 years. Dr. Pinkerton will continue as PI of Project 1 following his retirement as WCAHS Director.

Dr. Fadi Fathallah will be the new Director of WCAHS. Dr. Fathallah has served as the Associate Director of WCAHS for seven years. He is also Professor and Chair of the Biological and Agricultural Engineering Department as well as the Program Director for CalAgrAbility. Dr. Fathallah is a co-PI on Projects 3 and 4.

The WCAHS team is looking forward to a productive 2024-2025 project year under Dr. Fathallah's new leadership. The center will continue contributing to improving the health and safety of agricultural workers in the West through innovative research, interactive trainings, and tailored outreach.



Right: Dr. Kent Pinkerton and students; Left: Dr. Fadi Fathallah at last year's agricultural technology workshop.