



Culture is key!
Prevention of Farmworker Pesticide-Related Illness Using Cultural Contextual Education

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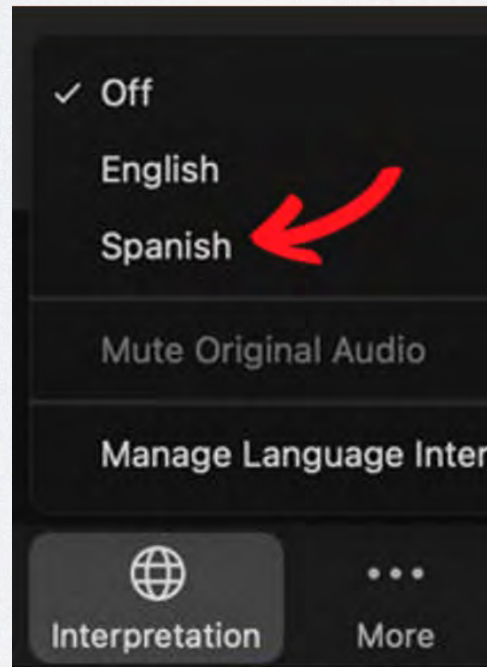
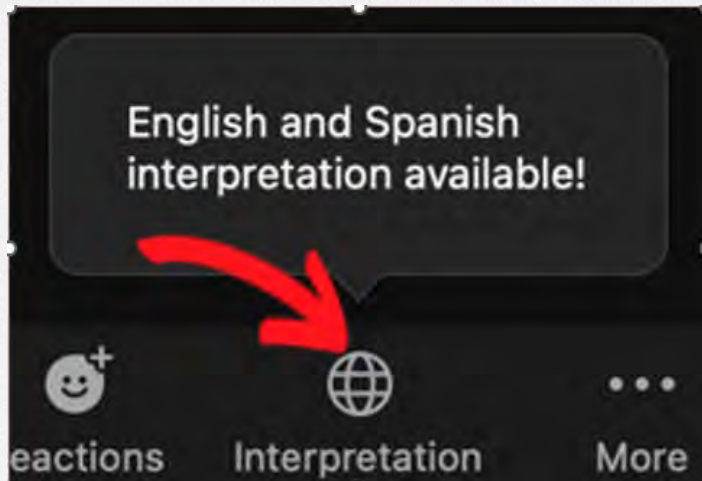
Thursday, December 5, 2024

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Globe icon

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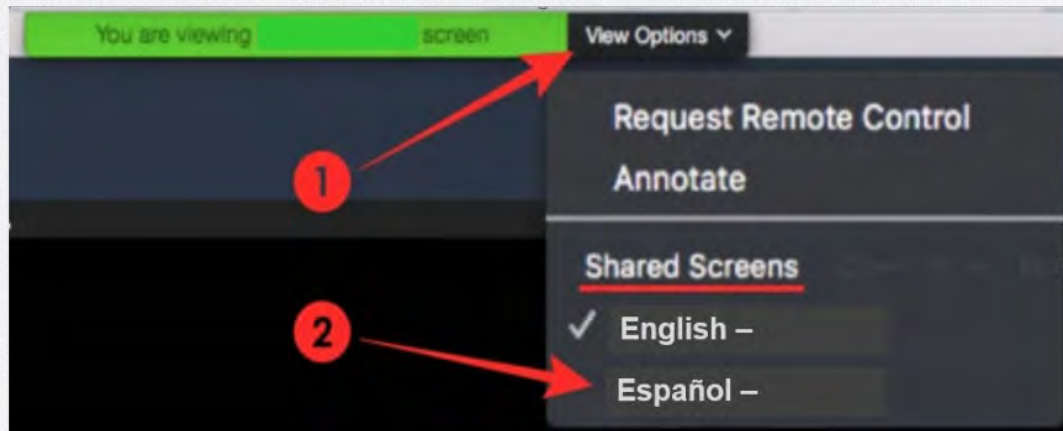
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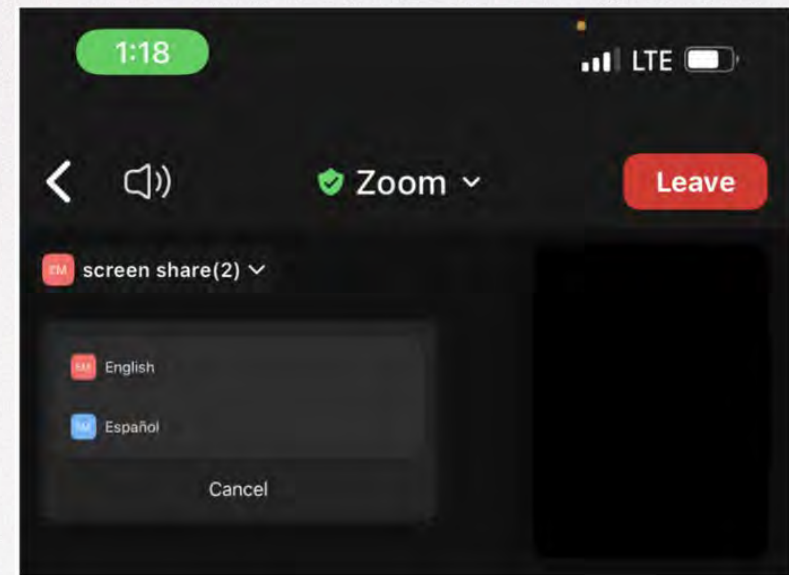
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3. Select "Language Interpretation"
4. Select "Español"
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Continuing Education



Migrant Clinicians Network is accredited as a provider of nursing continuing professional development by the American Nurses Credentialing Center's Commission on Accreditation.



The AAFP has reviewed Culture is key! Prevention of Farmworker Pesticide-Related Illness Using Cultural Contextual Education and deemed it acceptable for up to 1.00 Live AAFP Prescribed credit(s). Term of Approval is from 12/05/2024 to 12/05/2024 Physicians should claim only the credit commensurate with the extent of their participation in the activity.

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Objectives

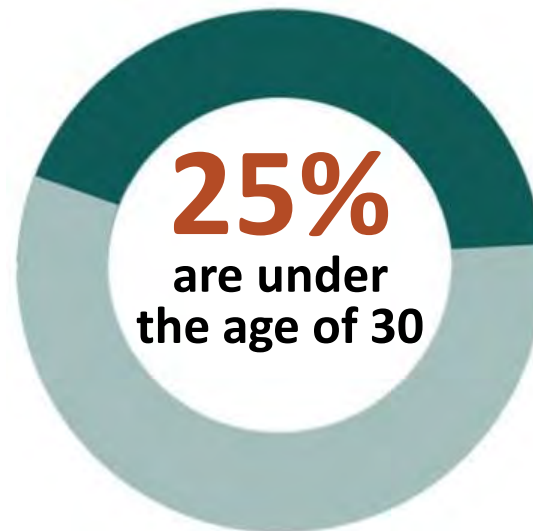
- Describe challenges farmworkers encounter in protecting themselves from pesticide exposure
- Explain appropriate messaging approaches for patients to prevent pesticide exposure at work
- Find training materials and messaging tools for patients on prevention of pesticide exposure



Agricultural Worker Demographics ^{1,2,3}

2.5 million

estimated population ^{2,3}

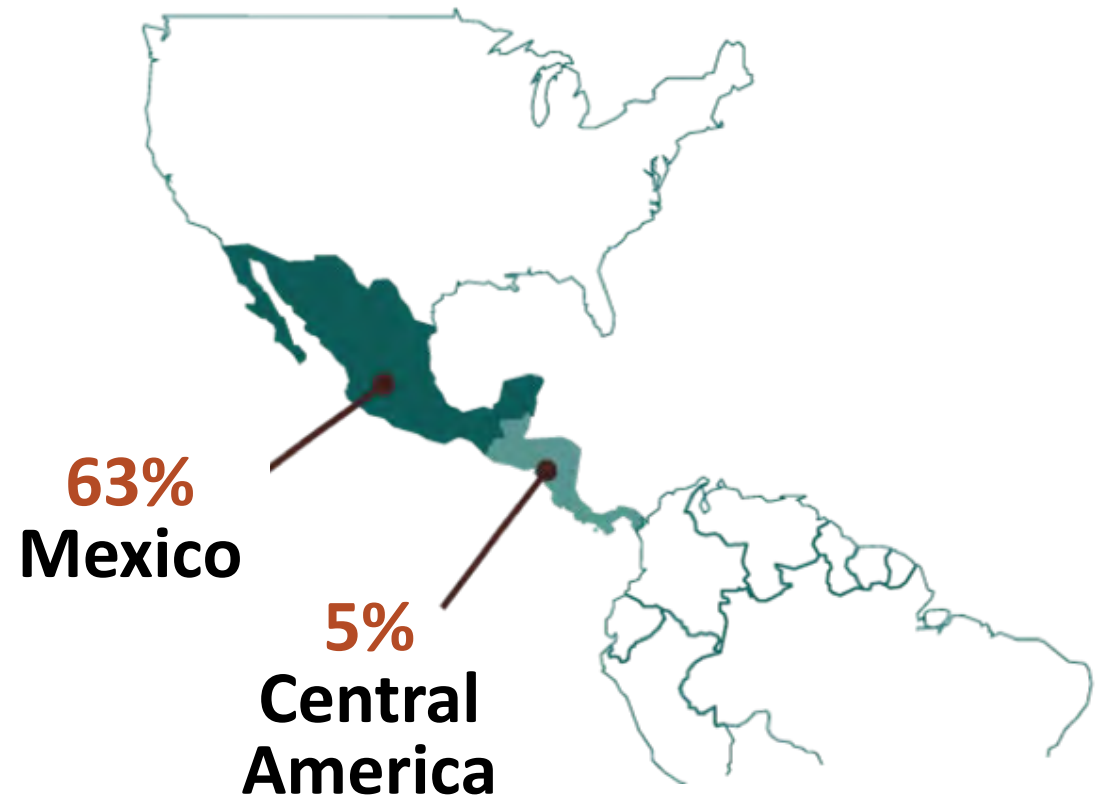


1. National Agricultural Workers Survey (NAWS) 2019-2020, <https://www.dol.gov/sites/dolgov/files/ETA/naws/pdfs/NAWS%20Research%20Report%202016.pdf>
2. Kandel W. Profile of Hired Farmworkers, A 2008 Update. Economic Research Service, US Department of Agriculture; Washington, DC; 2008. Economic Research Report No. 60.
3. Martin P. Immigration reform: implications for agriculture University of California, Giannini Foundation. Agricultural and Resource Economics Update. 2006;9(4)

Agricultural Worker Demographics ¹

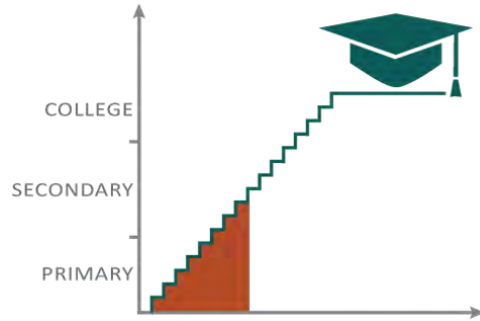


70% foreign born



1. <https://www.dol.gov/sites/dolgov/files/ETA/news/pdfs/NAWS%20Research%20Report%202014.pdf>

Agricultural Worker Demographics ¹



Foreign born workers, on average, have an **9th grade education**



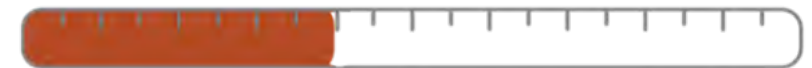
Mean and median individual income range from **\$20,000 to \$24,999**



20% of agricultural worker families had total family incomes below 100% of the Federal Poverty Level

A white icon of a person standing next to a large, light-brown caduceus symbol, representing healthcare.

52% reported not having health insurance



29% had not visited a U.S. healthcare provider in last 2 years

Worker Protection Standard (WPS):

Intended to reduce the risks of illness or injury to workers and handlers resulting from occupational exposures to pesticides in the production of agricultural plants

Federal Regulation- 1974 EPA published 40 CFR, Part 170

Anti-retaliation

A photograph of three workers in a tomato field. One worker in a red headscarf and striped shirt stands near a truck. Another worker in a plaid shirt stands in the field. A third worker in a white shirt and cap stands further back. The truck has "AIRCAT" written on it.

Workers cannot be fired or punished for attempting to comply with or exercising their rights under the WPS.



**WPS
Framework**

- **Inform**
- **Protect**
- **Mitigate**

Inform





Pesticide Safety Training

Content

Health effects of pesticides

How to reduce exposures at work and prevent take-home exposures

Location of detailed information about pesticides recently applied

How to follow directions and/or signs about keeping out of pesticide-treated areas

Decontamination procedures and emergency medical assistance

How to report violations to state enforcement agencies

Anti-retaliation protections

**IN CASE OF AN EMERGENCY
CALL 911**

This address is:
6750 Eldorado Road
Feddersburg, MD 21632

Nearest intersection:
Bailey Store Road and Eldorado Road

Nearest Hospital:
Nanticoke Memorial Hospital
801 Middleford Road
Seaford, DE 19973
302-629-6611

DANGER PELIGRO
PESTICIDES PESTICIDAS



KEEP OUT NO ENTRE

THIS PROPERTY TREATED WITH _____

DATE TREATED _____

WARNING STAY OUT UNTIL _____

HY-80 PRODUCTS CO. - MILTON HILLS, ILL. 60138-4108

EP 202




Notification



Pesticide safety information

Protect Yourself from Pesticides


IN AN EMERGENCY:

Get medical help nearby. 

Name: _____


Address: _____

Phone number: _____

If you need an ambulance, tell them where you are. 

Facility name: _____

Facility location: _____

If you have questions or concerns, call the pesticide regulatory agency. 

Name of state/tribal pesticide regulatory agency: _____

Address: _____

Phone number: _____

FOR MEDICAL TREATMENT INFORMATION, CALL THE POISON CONTROL CENTER: 1-800-222-1222

This poster contains pesticide safety information that is required under the Worker Protection Standard as revised in 2015, 40 CFR 170.311(a) (3) (i)-(iv).

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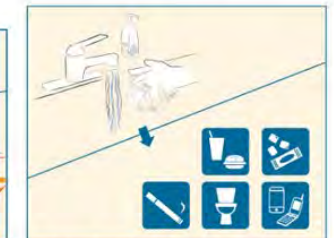
Avoid getting pesticides on your skin or in your body. Pesticides can be in many places. They can be on plants, in plants, in soil, and in irrigation water. Pesticides can drift in the air from nearby applications. They can also be on tractors and other equipment. Pesticides can also be found on used goggles, gloves, boots, and other personal protective equipment.



Protect your body from pesticide residue. Wear long-sleeved shirts and long pants when working. Also, wear shoes, socks, and a hat or scarf.



Stay out of treated areas when told, and whenever you see signs like this displayed. When you see a pesticide application taking place, stay back. Applicators must suspend their work if you get too close.



Wash your hands before you eat, drink, or chew gum. Also, wash before smoking, using the toilet, or using your phone.



Wash your body and hair with soap or shampoo right after work; then put on clean clothes.



When pesticides are spilled or sprayed on your body, wash immediately. Water, soap, and towels must be provided nearby. Use the nearest clean water, including springs, streams, and lakes, if they are closer to you. After that, wash your body and hair with soap or shampoo as soon as possible. Put on clean clothes.



Wash your work clothes before wearing them again. Wash them separately from other clothes.



Get medical help as soon as possible if you think pesticides caused an injury or illness.

Questions about pesticides? Call 1-800-858-7378 (National Pesticide Information Center)

Emergency assistance



IN AN EMERGENCY:

Get medical help nearby.



Name:

Address:

Phone number:

If you need an ambulance,
tell them where you are.



Facility name:

Facility location:

If you have questions or
concerns, call the pesticide
regulatory agency.



Name of state/tribal pesticide regulatory agency:

Address:


Phone number:



Workers may designate another individual to access information about the pesticides used in their worksites.



Clinician Access to Information

A photograph of a person wearing a hat and a light-colored shirt, operating a tractor with a large orange tank, likely for pesticide application, on a dirt road. The road is lined with tall, mature trees, creating a canopy effect. The scene is set in a rural, agricultural environment. The tractor is moving away from the viewer down the road. The ground is muddy with tire tracks and some puddles.

When an agricultural worker seeks medical assistance due to pesticide exposure, employers must promptly make available SDSs, product information, and application information to medical personnel.



Protect



Minimum age

Minimum Age

- Pesticide handlers and early-entry workers (entering during REI) must be at least 18 years old
- Members of owner's immediate family are exempt from this requirement





Restricted entry intervals
(REIs)

Application exclusion zones (AEZs)

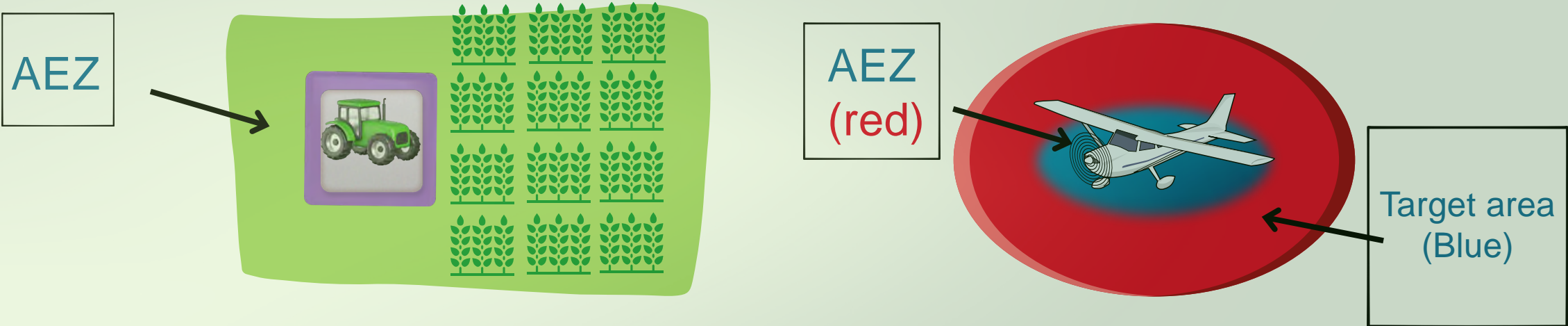


Application Exclusion Zone or AEZ

A small (25-100-foot) area around the pesticide application equipment where no one is permitted to be during a pesticide application. If an applicator sees a non-trained and unprotected person within this zone, they must suspend the application immediately and resume after the person leaves the area.



The AEZ moves with the application equipment like a halo around the application equipment. As the application equipment moves, new areas around the application become part of the AEZ, and areas that were in the AEZ cease to be within the AEZ once the application equipment has moved on.



The AEZ is the purple area around the application equipment. It moves with the application equipment as it proceeds

Personal protective equipment (PPE)



Personal protective equipment (PPE)

When a respirator is required, employer must provide handlers with the following before any activity requiring the respirator:

- Medical evaluation
- Fit test
- Respirator training



The background of the image is a blurred landscape. It features a green field in the middle ground and a blue sky with some light clouds in the upper portion. The overall effect is a soft, out-of-focus natural scene.

Mitigate

AREA DE
DESCONTAMINACIÓN



Decontamination

Decontamination



Provide **1 gallon** of water for **each worker** and **3 gallons** for each **handler** and each **early entry** workers measured at the beginning of the work period.




ÁREA DE
DESCONTAMINACIÓN

Emergency eyewash



Emergency Assistance



A white van is parked on a concrete surface next to a building with a ramp. The rear door of the van is open, and a person is visible inside the van. The van is parked on a concrete surface next to a building with a ramp. The ramp has metal railings. The building has a pinkish-red wall and a window with black bars. The van is white with a black bumper and a red reflector. The person inside the van is wearing a white shirt and a dark vest with orange and red stripes. The text is overlaid on a white rectangular background in the center of the image.

Employers must provide “prompt” transportation to an emergency medical facility for workers or handlers who may have been exposed to pesticide



Requires employers to promptly provide the product's Safety Data Sheet (SDS), product information (name, EPA Reg No and active ingredient), as well as the circumstances of the exposure to treating medical personnel

MCN approach

Enfoque de MCN

What workers need to protect themselves?

¿Qué necesitan los trabajadores para protegerse?



Training
Entrenamiento



Personal Protective Equipment (PPE)
Equipo de protección personal (EPP)



Know your rights
Conocimiento de los derechos



Community resources
Recursos de la comunidad



What does this mean for healthcare providers and materials?

¿Qué significa esto para los proveedores de servicios de salud y los materiales?

Create culturally appropriate educational materials for workers that consider...

Crear materiales educativos culturalmente apropiados para los trabajadores que consideren...





Language

- An entry point
- Customs and traditions
- Values and anti-values
- Social conditions
- Power dynamics

Lenguaje

- Una puerta de entrada
- Costumbres y tradiciones
- Valores y antivalores
- Condiciones sociales
- Dinámicas de poder

Literacy - Alfabetización



Spoken communication
Comunicación verbal

Numbers and math
Números y matemáticas

Written communication
Comunicación escrita

Using health information
Usar la información de salud

Navigating the health system
Navegación del sistema de salud

Whose literacy?
¿De quién?

Yours or theirs?
¿Suya o de ellos?



Personal Health Literacy

The degree to which individuals can find, understand, and use information and services to inform health-related decisions and actions for themselves and others.

Organizational Health Literacy

The degree to which organizations equitably enable individuals to find, understand, and use information and services to inform health-related decisions and actions for themselves and others.

Popular education

A single way of presenting the message, concept, DOES NOT WORK for everyone





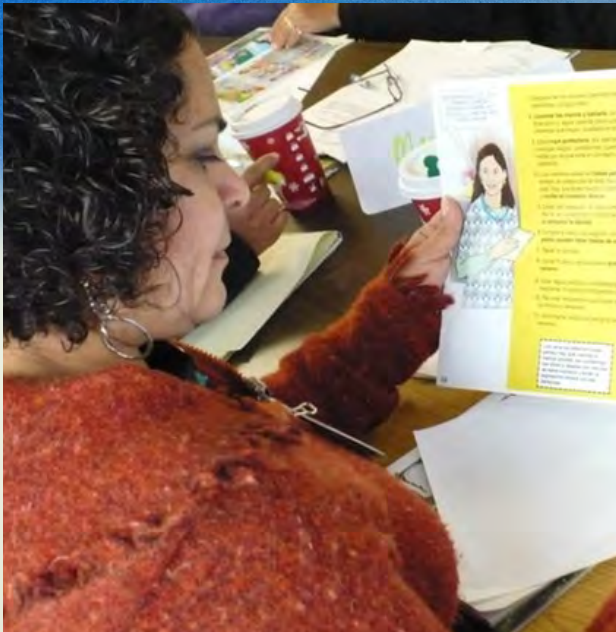
Campeños sin fronteras

Take advantage of CHW's role in promoting and improving health equity

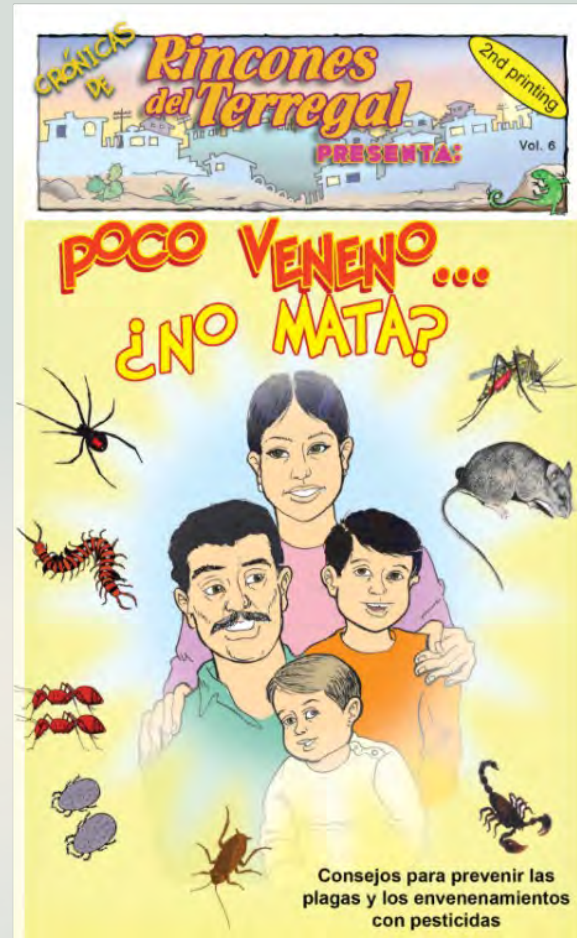
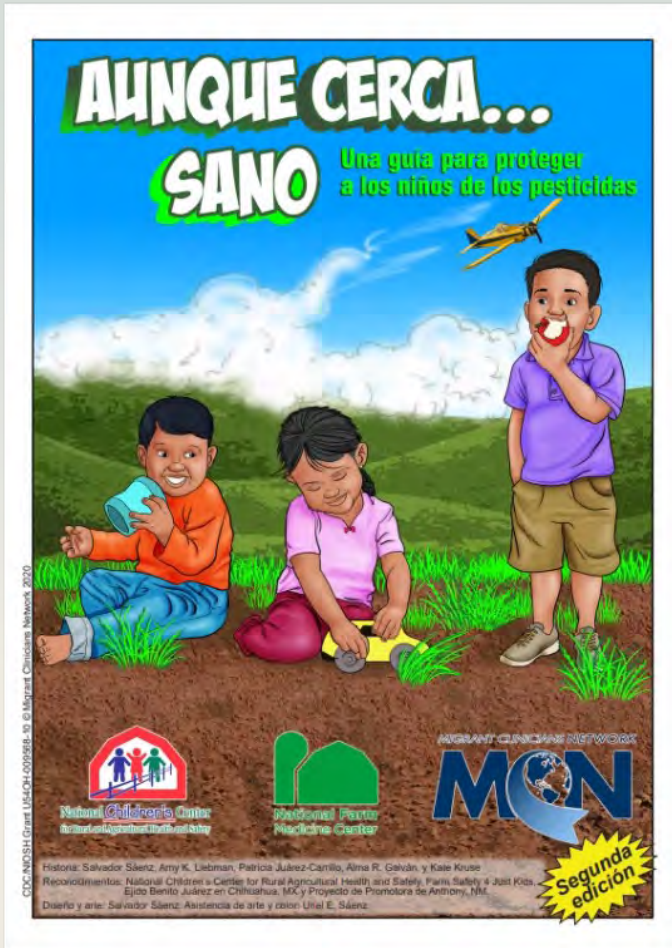
- Customize health education to incorporate culture, values and beliefs systems
- Build networks and coalitions that empower disadvantaged communities

Health promotion strategies

- CHW fundamental role in public health
- Health equity
- Popular education
- Language justice
- Community participation/mobilization



MCN Work

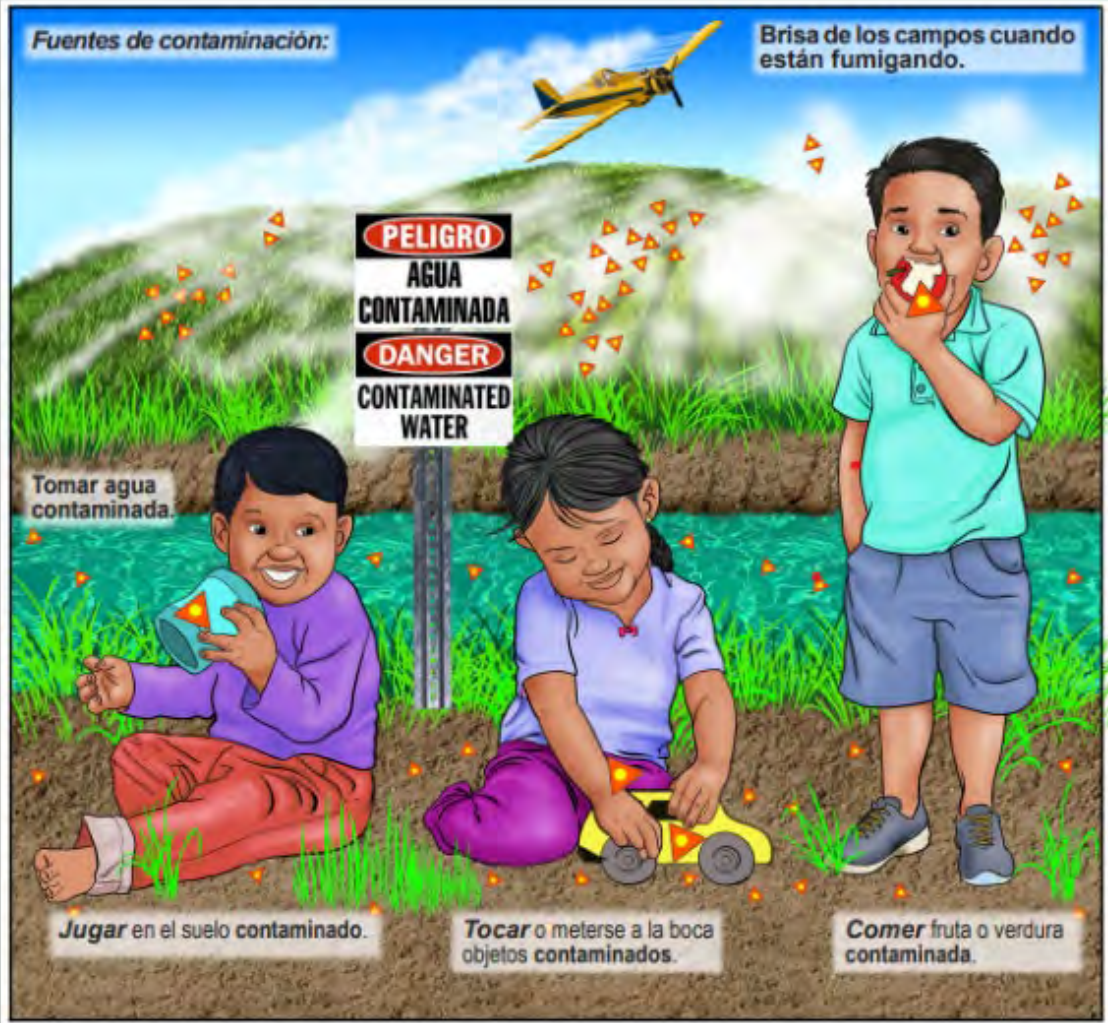


[Aunque Cerca... Sano](#)

Connect with their reality



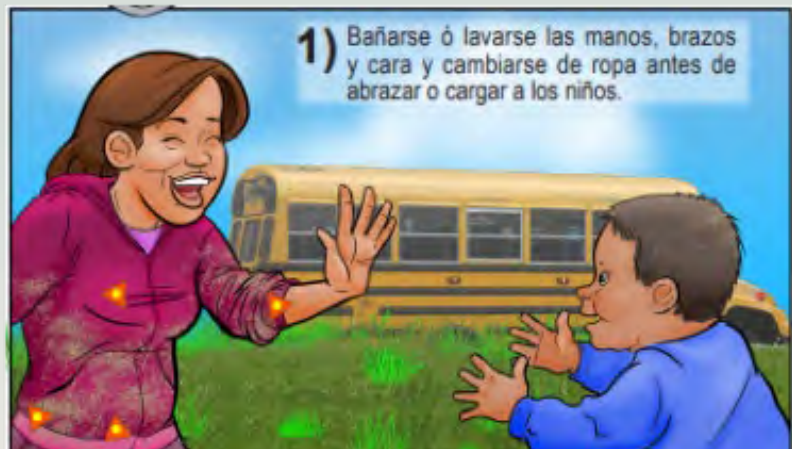
and what they value...



Present practical solutions



Simple and clear



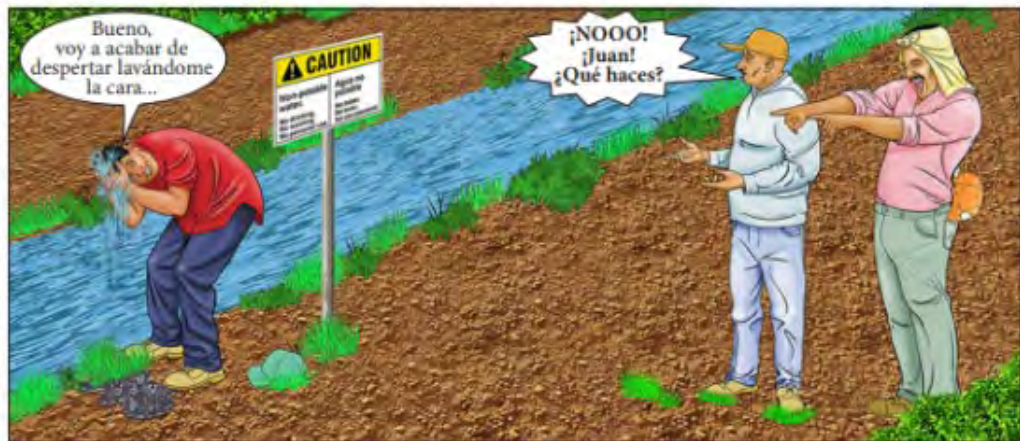
JUAN ABRE LOS OJOS

CÓMO PROTEGERSE DE LOS PESTICIDAS

Estandar de protección del
trabajador agrícola

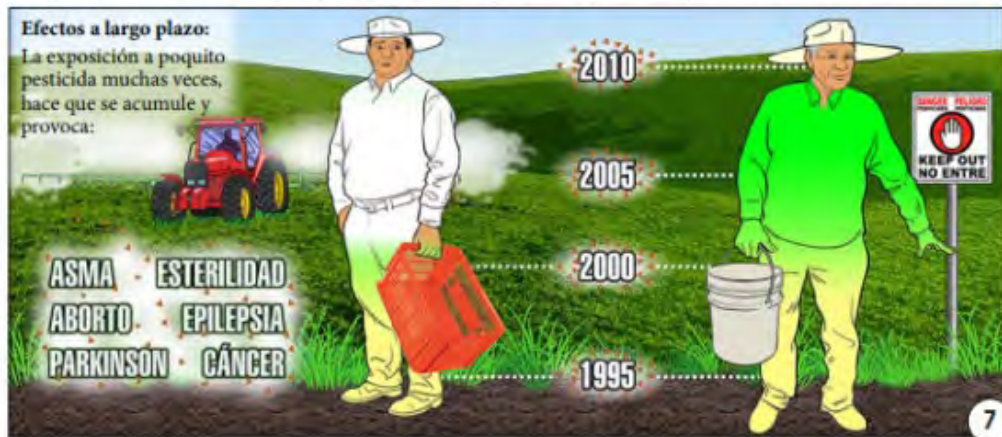
Worker Protection Standard



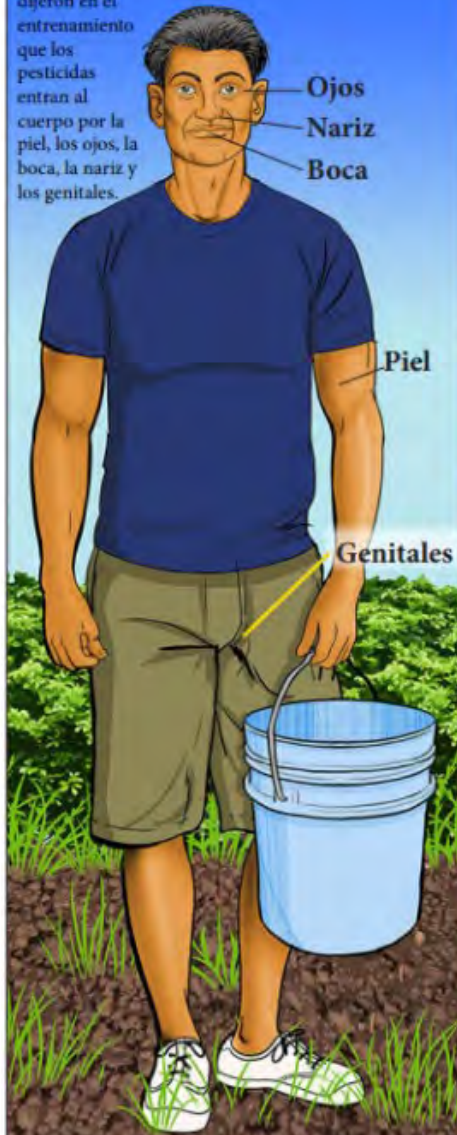


Drift o brisa de pesticidas





Ya nos dijeron en el entrenamiento que los pesticidas entran al cuerpo por la piel, los ojos, la boca, la nariz y los genitales.



Para protegernos en el trabajo siempre debemos usar:

Sombrero, cachucha o gorra

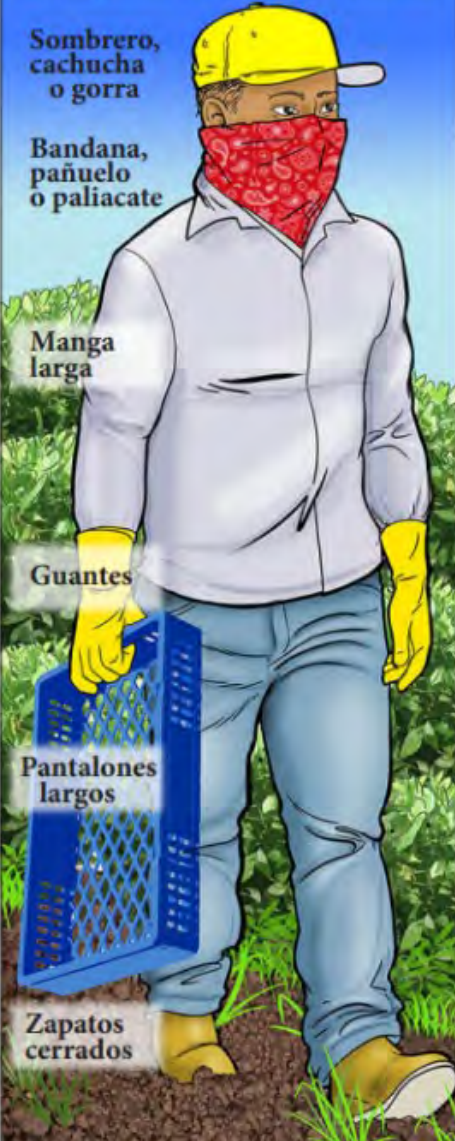
Bandana, pañuelo o paliacate

Manga larga

Guantes

Pantalones largos

Zapatos cerrados



Además, debes lavarte las manos antes de:



Usar el baño

Fumar



Tocarte los ojos o la boca



Comer



Quitarnos la ropa y los zapatos antes de entrar a la casa.



10

Separar la ropa del trabajo.



Lavarla aparte.



Bañarnos antes de saludar o tocar a alguien.



Podemos hacer todo esto, ¿Pero no habrá problema con los dueños?



11

Ninguno, por ley tienes derecho a estar protegido y los patrones están obligados por el Worker Protection Standard (Estándar de Protección del Trabajador Agrícola) de proteger a los trabajadores de los pesticidas.



Si estamos rodeados de pesticidas y estamos sanos, es porque cada uno hacemos nuestra parte.



Compañeros, nuestra salud está en juego, los pesticidas nos pueden dañar, pero tenemos derecho a cuidarnos y proteger nuestra salud. Si tú no lo haces, nadie lo hará por ti.



12

Si tienes alguna duda pregunta. Se trata de tu bienestar y tu salud.



MIGRANT CLINICIANS NETWORK

MCN

PISCA

This material was produced through support from a grant from The National Institute for Occupational Safety and Health (U54-OH011230).



Agricultural Worker Pesticide Safety Training

Facilitator Guide



CHW curriculum on WPS

Estándar para la Protección del Trabajador (WPS)



¿Por qué estamos recibiendo este entrenamiento?



Worker Protection Standard Pesticide Safety Training Curriculum and Resources



Worker Protection Standard Pesticide Safety Training Curriculum - Culturally and linguistically appropriate curriculum with supporting resources for training workers on the revised Worker Protection Standard. Developed by the Florida State University PISCA Project and Migrant Clinicians Network.

Download Resource

- [WPS PesticidasEnglishFINAL4_2021Website.pdf](#) (33.52 MB)
- [WPS PesticidasSpanishFINAL4_2021_Website.pdf](#) (19.67 MB)
- [WPS Pesticide - Fijo Chart](#) (8.32 MB)
- [WPS Pesticide - Facilitator Guide \(English\)](#) (2.03 MB)
- [WPS Pesticide - Facilitator Guide \(Spanish\)](#) (1.99 MB)
- [Comic Book - Juan Abre los Ojos cómo protegerse de los pesticidas](#) (7.25 MB)

Categories [Environmental and Occupational Health](#) [Pesticides](#) [Promotoras](#)

Subscription Interest [Environmental/Occupational Health](#)

Related Resources

MORE



Darle un Buen Uso a los Pesticidas

A Spanish language infold with pesticide safety information.



OSHA's Campaign to Prevent Heat Illness in Outdoor Workers

HEAT ILLNESS CAN BE DEADLY. Every year, thousands of workers become sick from exposure to heat, and some even die. These illnesses and deaths are...



Pesticide Educational Materials for Promotoras - Wake Forest University

<http://www.wfubmc.edu/Research/Family-Medicine/Pesticide-Promotora.htm>Pesticide educational materials for promotoras and the community. Includes...



Heat Stress Fotonovela

Fotonovelas in English and Spanish. Produced by the North Carolina Farmworker Project.



Influenza in Workers and Pigs

OSHA facts sheet and guidance for commercial swine farmers and pork producers. Bilingual "quick card" to assist with worker protection.

MORE

Promising practices

- Recognize the process
- Take the time to get to know the language and value system
- Culturally appropriate materials
- Build individual, community and institutional literacy
- Community Health Workers as a public health strategy
- Partner with CBOs and communities themselves
- Hyperlocal campaigns



Developing farmworker-informed infographics

Maggie Acosta
Director of Outreach



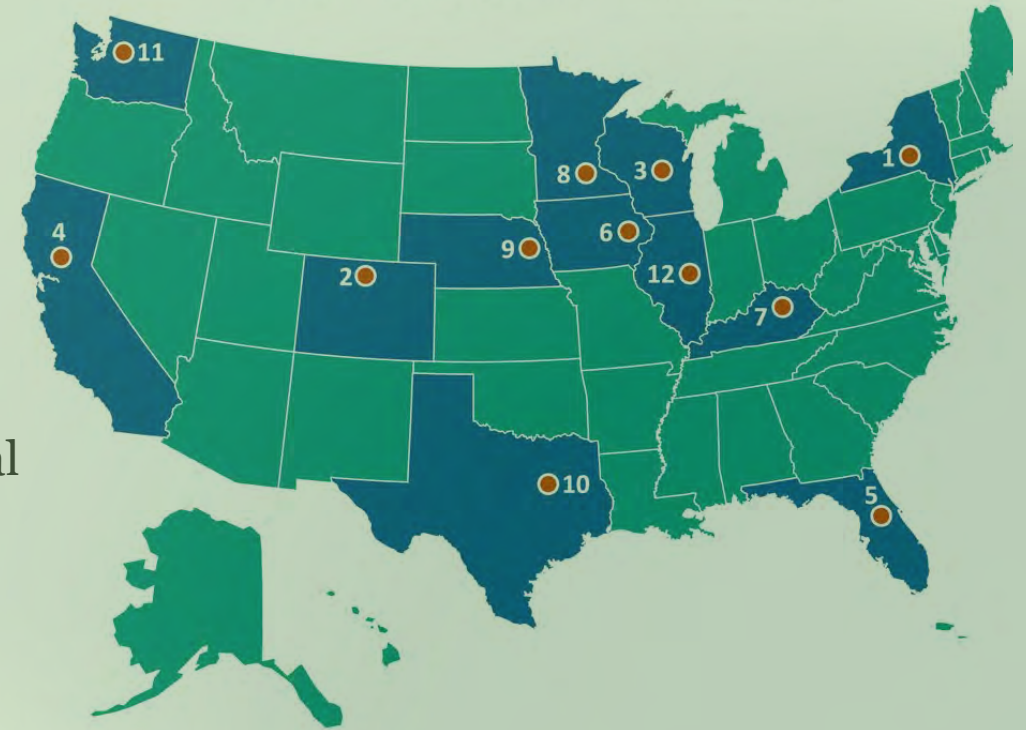
GREAT LAKES CENTER FOR
FARMWORKER
HEALTH AND WELLBEING



Great Lakes Center for Farmworker Health and Wellbeing

1 of 12 Centers for Agricultural Health funded by the National Institute for Occupational Safety and Health (NIOSH)

NIOSH Centers for Agricultural Safety and Health




GREAT LAKES CENTER FOR
FARMWORKER
HEALTH AND WELLBEING



1. Northeast Center for Occupational Health and Safety (Bassett Healthcare Network)
2. High Plains Intermountain Center for Agricultural Health and Safety (Colorado State University)
3. National Children's Center for Rural and Agricultural Health and Safety (National Farm Medicine Center)
4. Western Center for Agricultural Health and Safety (University of California, Davis)
5. Southeastern Coastal Center for Agricultural Health and Safety (University of Florida)
6. Great Plains Center for Agricultural Health (University of Iowa)
7. Southeast Center for Agricultural Health and Injury Prevention (University of Kentucky)
8. Upper Midwest Agricultural Safety and Health Center (University of Minnesota)
9. Central States Center for Agricultural Safety and Health (University of Nebraska Medical Center)
10. Southwest Center for Agricultural Health, Injury Prevention and Education (University of Texas Health Science Center at Houston)
11. Pacific Northwest Agricultural Safety and Health Center (University of Washington)
12. Great Lakes Center for Farmworker Health and Well-being (University of Illinois Chicago)

Our Approach to Community Engagement

Increasing Level of Community Involvement, Impact, Trust, and Communication Flow 

<i>Outreach</i>	<i>Consult</i>	<i>Involve</i>	<i>Collaborate</i>	<i>Shared Leadership</i>
<p><i>Some Community Involvement</i></p> <p><i>Communication flows from one to the other, to inform</i></p> <p>Provides community with information.</p> <p>Entities coexist.</p> <p>Outcomes: Optimally, establishes communication channels and channels for outreach.</p>	<p><i>More Community Involvement</i></p> <p><i>Communication flows to the community and then back, answer seeking</i></p> <p>Gets information or feedback from the community.</p> <p>Entities share information.</p> <p>Outcomes: Develops connections.</p>	<p><i>Better Community Involvement</i></p> <p><i>Communication flows both ways, participatory form of communication</i></p> <p>Involves more participation with community on issues.</p> <p>Entities cooperate with each other.</p> <p>Outcomes: Visibility of partnership established with increased cooperation.</p>	<p><i>Community Involvement</i></p> <p><i>Communication flow is bidirectional</i></p> <p>Forms partnerships with community on each aspect of project from development to solution.</p> <p>Entities form bidirectional communication channels.</p> <p>Outcomes: Partnership building, trust building.</p>	<p><i>Strong Bidirectional Relationship</i></p> <p>Final decision making is at community level.</p> <p>Entities have formed strong partnership structures.</p> <p>Outcomes: Broader health outcomes affecting broader community. Strong bidirectional trust built.</p>

Reference: Modified by the authors from the International Association for Public Participation.

Figure 1.1. Community Engagement Continuum

Tailoring resources to farmworkers (FWs)

- Necessary to tailor materials
 - Literacy levels vary
 - Languages: Spanish, French, Indigenous dialects, more
- Yet only up to 42% of materials are developed specifically for FWs, even within agricultural and FW-focused organizations (Harwell et al, 2023)

ES HORA DE REGLAMENTAR LOS PLAGUICIDAS DE ALTA PELIGROSIDAD

Esto no comprometerá la agricultura, pero salvará vidas

Los plaguicidas de alta peligrosidad:

- Aún se emplean en países de ingresos bajos y medianos
- Son tóxicos incluso en pequeñas cantidades
- Pueden provocar cáncer y otros efectos a largo plazo en la salud
- Se utilizan en miles de suicidios
- Son especialmente peligrosos para las mujeres y los niños

La exposición se produce por:

- Inhalación
- Contacto con la piel o los ojos
- Consumo de alimentos o agua contaminados

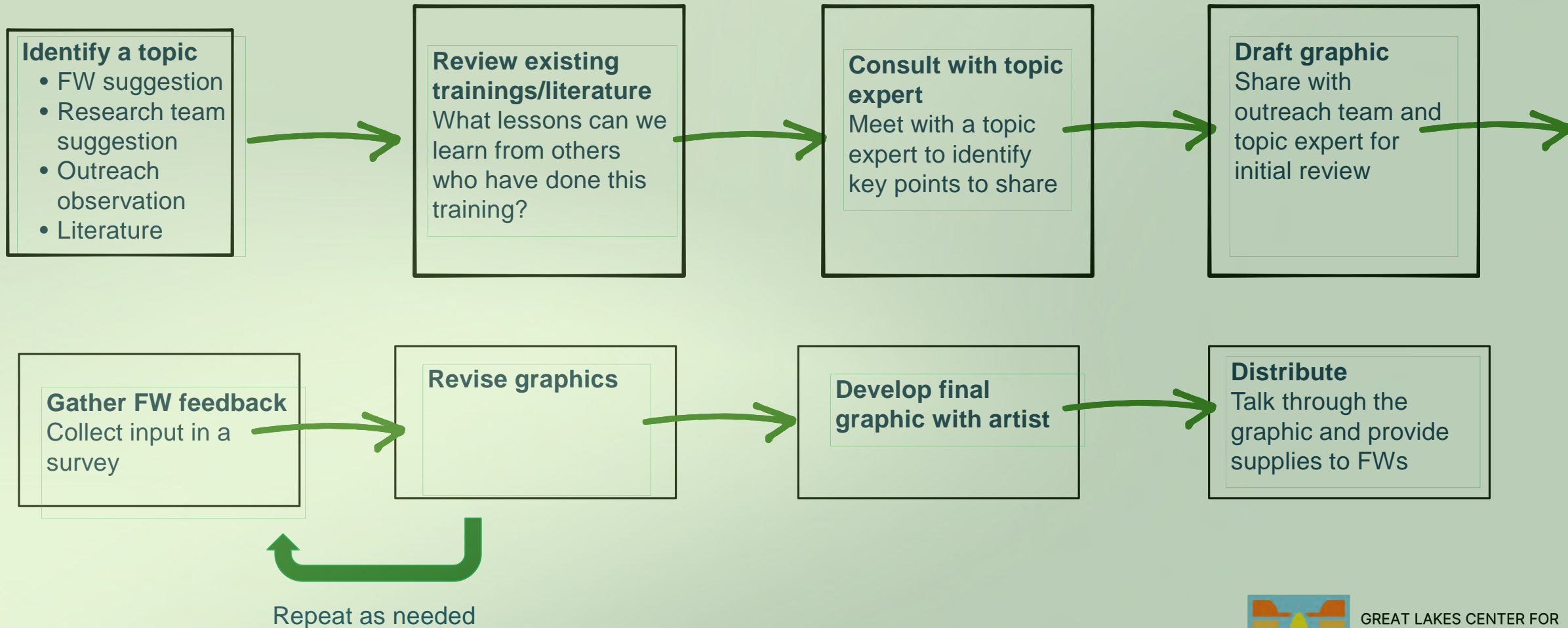
Infographic on highly hazardous pesticides. Strategic Approach to International Chemical Management. UN Environment Program.



GREAT LAKES CENTER FOR
FARMWORKER
HEALTH AND WELLBEING

Process for developing and testing graphics

We develop graphic-based trainings to communicate information to FWs.



Version 1 Jan 2024



Feedback:

- Keep pesticide color consistent
- Add prevention recommendations



Version 2 April 2024

Feedback:

- Change pesticide color to orange to indicate toxicity



Version 3- July 2024



- Use green check marks



Many workers use trash bags for laundry and reported difficulty separating clothes.

Final product

QUE SON LOS RESIDUOS DE PESTICIDA? PESTICIDAS SON QUIMICOS QUE SON VENENOSOS A LAS PERSONAS.



Muchas veces, los pesticidas son invisibles. Aunque no los puedas ver, todavía pueden ser dañinos.



Algunos trabajadores ponen pesticidas a las plantas y necesitan protección especial.



Todos los que trabajan con plantas tienen riesgo de contaminación.



El residuo de pesticida es lo que queda en la planta o en el suelo después de la fumigación.



Tocando las plantas se puede contaminar las manos.



Si no se lava bien las manos, la contaminación puede afectar sus ojos, piel y boca.



Caminando en la tierra les puede contaminar los zapatos.



Los zapatos pueden contaminar la casa y los que viven adentro.

127 farmworkers gave input to develop this graphic

- Images of daily life used to convey health information
- Familiar art style
- Text is complementary, but not the focal point



Also provide laundry bags to workers

Final product

COMO PREVENIR LA CONTAMINACION DE PESTICIDAS



1
Quítese el guante agarrándolo desde adentro para no tocar con su mano expuesta.



2
Deje sus zapatos de trabajo afuera de la casa o en un solo cuarto.



06:00
3
Lave sus manos frecuentemente y báñese tan pronto al regresar a su casa.
06:05



4
Lave su ropa de trabajo separado de su otra ropa.



127 farmworkers gave input to develop this graphic

- Images of daily life used to convey health information
- Familiar art style
- Text is complementary, but not the focal point



Also provide laundry bags to workers

Benefits of collaborating with workers



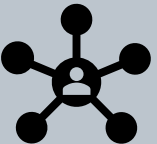
Improves Comprehension

- Conducted post-assessment with 33 workers
 - Could explain what pesticide residue is
 - Recognized that any farmworker can be at risk of poisoning
 - Could name at least 2 ways to prevent poisoning



Facilitates Dialogue

- Allows outreach staff to understand the working and living conditions of workers and to discuss ways they can practice prevention



Enhances outreach

- Builds relationships so that FWs are more comfortable in asking for additional resources
- Increases workers' interest in collaborating with us

Thank you!

Connect with us

- NIOSH Center for Agricultural Safety & Health
- Based at the University of Illinois Chicago
- Comprised of partner organizations across Illinois



farmworkerhealth.uic.edu



linktr.ee/glcfhw



farmworkerhealth@uic.edu



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