Empowering the Farmworker Community through Health and Safety Education, Resources and Advocacy
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INTRODUCTION

The following information is the data gathered from the trainings provided through AFOP’s National Farmworker Training Program, developed and implemented in 2013, funded by the U.S. Environmental Protection Agency (EPA) and the Occupational Safety and Health Administration (OSHA) under Susan Harwood Training Program Grant. The data was gathered from January 2017 to December 2017.

AFOP’s National Farmworker Training Program (NFTP) is a recognized leader in providing occupational health and safety training to migrant and seasonal farm workers. National in scope, the program addresses three of the most critical health and safety hazards for agricultural workers: pesticide exposure, heat-related illnesses, and tractor safety. AFOP has developed a suite of bilingual, low-literacy trainings and supplemental materials to address the aforementioned hazards in the agricultural settings where they are most prevalent, and is continually evolving to meet the needs of the farm workers we serve.

In order to fully support the agricultural community, we need to have a finger on the pulse of what information is needed in field. We gather that data through evaluation. AFOP’s NFTP trainer network disseminates multi-tiered evaluations to track the efficacy of not only the information and topics being covered, but also the format and manner in which they are delivered. Trainers are even provided evaluations to appraise each program year. Evaluation is a key component of the NFTP- second only to training- ensuring that goals and objectives are being met and continuing the success and evolution of a program serving tens of thousands of agricultural employees and employers every year.

This data collected in this report includes the following trainings:

- Worker Protection Standard (WPS)
- Heat Stress Prevention (HSP)
- Limiting Exposures Around Families (LEAF)
- Pesticide Exposure & Pregnancy (PEP)
- Tractor Safety
OVERALL TRAINING DATA

The overall training data is collected from the training rosters that filled before each training session.

TRAINING INFORMATION:

- **49,697** Total Farmworkers Trained
  - **16,535** Total Farmworker Women Trained
  - **33,162** Total Farmworker Men Trained
  - **4,797** Total Farmworker Children (under 16) Trained
- **2,750** Total Training Sessions
- **27,198** Overall Training Contact Hours
- **545** Overall # of Employers Trained

TRAINING TOPIC:

<table>
<thead>
<tr>
<th>Topic</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>WPS</td>
<td>14,411</td>
</tr>
<tr>
<td>HS</td>
<td>14,951</td>
</tr>
<tr>
<td>LEAF</td>
<td>9,693</td>
</tr>
<tr>
<td>PEP</td>
<td>4,917</td>
</tr>
<tr>
<td>JA</td>
<td>1,915</td>
</tr>
<tr>
<td>TS</td>
<td>3,810</td>
</tr>
</tbody>
</table>

- **WPS** = Worker Protection Standard
- **HS** = Heat Stress Prevention
- **LEAF** = Limiting Exposure Around Families
- **PEP** = Pesticide Exposure & Pregnancy
- **JA** = Jose Learns About Pesticides

TRAINING LANGUAGE

- **25%** English
- **64%** Spanish
- **11%** English & Spanish
- **0%** Haitian-Creole (2 training sessions)
- **0%** Spanish/Mixteco (2 sessions)
- **0%** Spanish/Haitian-Creole (1 session)
TRAINING LOCATION TYPE

- 44% Farm
- 21% Trainer’s Organization
- 12% School
- 13% Migrant Housing
- 6% Business
- 5% Other Organization
- 0% Bus - Vehicle
- 0% Gov. Agency
- 0% Other

TYPE OF WORKER Trained

- 81% Crop Worker
- 6% Nursery Worker
- 10% Others
- 0% Livestock Workers
- 0% Tree Production
- 0% Landscaper

OVERALL PARTICIPANTS ATTENTION TO TRAINING

- 56% All workers paid attention all of the time
- 42% Most workers paid attention most of the time
- 2% Some workers paid attention some of the time
**EVALUATION - TRAINING SATISFACTION**

**EMPLOYER SATISFACTION**

*Employers may include: grower, crew leader or supervisors*

The Employer Satisfaction Survey was conducted with 101 employers. The results are the following:

- 92% of growers thought the WPS and Heat Stress **training was useful** to their employees
- 81% of growers thought the WPS and Heat Stress **training was interactive**
- 90% of growers thought the WPS and Heat Stress **training was well explained**
- 14% of growers thought the WPS and Heat Stress **training was too long**
- 79% of growers said they would be interested in other topics to be delivered in this style of training

What topics: (Employers selected multiple options)
- 43% - First Aid/CPR
- 32% - Personal Hygiene
- 15% - Workplace Safety
- 9% - Food Safety
- 1% - Other (not specified)

**WORKER SATISFACTION**

The Worker Satisfaction Survey was conducted with 3,318 farmworkers receiving a WPS training. The results are the following:

- 96% of workers thought the WPS training was useful
- 95% of workers will share the information they learned with friends and family

What did workers like the **most** of the training?
- 72% Everything
- 20% Information
- 5% Flipchart
- 3% Trainer

What did workers like the **least** of the training?
- 94% Liked everything about the trainings
- 4% Too Long
- 1% Trainer
- 1% Location

The Training was...
- 47% Informative
- 45% Interesting
- 7% Fun
- 1% Long
- 0% Boring
KNOWLEDGE TRANSFER EVALUATIONS

EVALUATION LEVEL 2: WPS KNOWLEDGE TRANSFER

The WPS Knowledge Transfer Survey was conducted with 3,318 farmworkers before and after receiving the WPS training. These are the results:

DEMOGRAPHIC INFORMATION OF WORKERS SURVEYED:

- 70% of workers surveyed were Men
- 30% of workers surveyed were Women
- 36 is the average age of workers surveyed
- 9 is the average of years working as farmworkers
- 73% of the workers surveyed have smart phones

- Education Level:
  - 6% have no education
  - 35% have elementary education
  - 38% have high school education
  - 7% have a GED
  - 7% have some college education
  - 4% have a college degree
  - 4% did not answer

- 58% of workers have received WPS training previously

  - Previous training was conducted by:
    → 36% by their boss
    → 10% by a crew leader
    → 5% by a government official
    → 7% by other
    → 26% did not answer

  - Previous training format:
    → 40% video
    → 9% flipchart
    → 6% power point
    → 3% other format (not specified)
    → 42% did not answer
Overall, farmworkers improve their knowledge about pesticide safety by 19%.

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>PRE TEST CORRECT ANSWERS</th>
<th>POST TEST CORRECT ANSWERS</th>
<th>INCREASE KNOWLEDGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>91%</td>
<td>99%</td>
<td>8%</td>
</tr>
<tr>
<td>2</td>
<td>86%</td>
<td>99%</td>
<td>13%</td>
</tr>
<tr>
<td>3</td>
<td>86%</td>
<td>99%</td>
<td>13%</td>
</tr>
<tr>
<td>4</td>
<td>78%</td>
<td>98%</td>
<td>20%</td>
</tr>
<tr>
<td>5</td>
<td>84%</td>
<td>98%</td>
<td>14%</td>
</tr>
<tr>
<td>6</td>
<td>81%</td>
<td>97%</td>
<td>16%</td>
</tr>
<tr>
<td>7</td>
<td>59%</td>
<td>91%</td>
<td>32%</td>
</tr>
<tr>
<td>8</td>
<td>49%</td>
<td>86%</td>
<td>38%</td>
</tr>
<tr>
<td>9</td>
<td>80%</td>
<td>96%</td>
<td>17%</td>
</tr>
</tbody>
</table>

**Increased Knowledge:**
Please refer to the above table to learn previous knowledge on each topic. The question numbers on the table match the number on each statement.

1. Workers increased their knowledge by 8% about where pesticides are found (on plants, the ground, and produce, in the air or on your clothes)

2. Workers increased their knowledge by 13% on health risks of pesticide exposure (include sweating, vomiting, dizziness, headache, muscle pain, and skin rashes)

3. Workers increased their knowledge by 13% on what to do if pesticides gen on their skin and clothes (shower, etc.)

4. Workers increased their knowledge by 20% on what knowing they should bring the pesticide label with them in case of a health emergency due to pesticide exposure

5. Workers increased their knowledge by 14% on knowing how to avoid pesticide exposure by always wash your hands before eating, drinking, smoking or using the bathroom at work

6. Workers increased their knowledge by 16% on how to follow instructions and signs about not entering areas where pesticides are being used

7. Workers increased their knowledge by 32% on learning that their boss cannot punish them for leaving an area where pesticides are being sprayed

8. Workers increase knowledge by 38% on having to be trained on WPS every year

9. Workers increased their knowledge by 17% on learning that their boss must arrange the transportation to a doctor if in case of a health emergency while working
EVALUATION LEVEL 2: HEAT STRESS PREVENTION KNOWLEDGE TRANSFER

The Heat Stress Prevention Knowledge Transfer Survey was conducted with 373 farmworkers before and after receiving the training. These are the results:

<table>
<thead>
<tr>
<th>QUESTIONS</th>
<th>PRE</th>
<th>POST</th>
<th>IMPROVEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>How many of you think a person can become seriously ill, and even die, if their body becomes overheated?</td>
<td>15%</td>
<td>20%</td>
<td>5%</td>
</tr>
<tr>
<td>How many of you think extreme thirst, dry mouth, nausea and irritability are all signs of heat exhaustion?</td>
<td>15%</td>
<td>19%</td>
<td>4%</td>
</tr>
<tr>
<td>How many of you think an energy drink can help prevent heat exhaustion?</td>
<td>7%</td>
<td>7%</td>
<td>0%</td>
</tr>
<tr>
<td>How many of you think if a person loses consciousness or does not improve after trying to cool them down, it is best to call for medical help?</td>
<td>16%</td>
<td>19%</td>
<td>2%</td>
</tr>
<tr>
<td>How many of you think wearing loose-fitting, light colored clothing to work, can lower your risk for a heat related illness?</td>
<td>16%</td>
<td>20%</td>
<td>4%</td>
</tr>
<tr>
<td>How many of you think a person with a chronic medical condition, such as high blood pressure or diabetes, has a greater risk for heat exhaustion?</td>
<td>16%</td>
<td>19%</td>
<td>3%</td>
</tr>
<tr>
<td>How many of you think you should drink a quart of water every hour to prevent dehydration?</td>
<td>15%</td>
<td>18%</td>
<td>3%</td>
</tr>
</tbody>
</table>

Liked the training 97%

Evaluation Level 2: Tractor Safety Knowledge Transfer

The Tractor Safety Knowledge Transfer Survey was conducted with 159 farmworkers before and after receiving the training. These are the results:

<table>
<thead>
<tr>
<th>QUESTIONS</th>
<th>PRE</th>
<th>POST</th>
<th>IMPROVEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>How many of you think you should read the operator’s manual and be familiar with your tractor before driving?</td>
<td>16%</td>
<td>24%</td>
<td>8%</td>
</tr>
<tr>
<td>How many of you think you should inspect the area and terrain where your tractor is parked?</td>
<td>15%</td>
<td>24%</td>
<td>9%</td>
</tr>
<tr>
<td>How many of you think if the tractor has ROPS, you don’t need to wear a seatbelt?</td>
<td>9%</td>
<td>10%</td>
<td>1%</td>
</tr>
<tr>
<td>How many of you think you should never get off a moving tractor or leave it running?</td>
<td>19%</td>
<td>23%</td>
<td>4%</td>
</tr>
<tr>
<td>How many of you think it is safe to carry passengers on the tractor with you?</td>
<td>8%</td>
<td>12%</td>
<td>3%</td>
</tr>
<tr>
<td>How many of you think rollovers are generally due to driving too fast for the terrain?</td>
<td>16%</td>
<td>23%</td>
<td>7%</td>
</tr>
<tr>
<td>How many of you think you should turn on a tractor in open space to prevent carbon monoxide poisoning?</td>
<td>17%</td>
<td>24%</td>
<td>7%</td>
</tr>
</tbody>
</table>

Liked the training 100%
EVALUATION LEVEL 2: LEAF KNOWLEDGE TRANSFER

The LEAF Knowledge Transfer Survey was conducted with 279 farmworkers before and after receiving the training. These are the results:

<table>
<thead>
<tr>
<th>QUESTIONS</th>
<th>PRE</th>
<th>POST</th>
<th>IMPROVEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>How many of you think that pesticides are used to prevent, destroy, or repel pests?</td>
<td>17%</td>
<td>20%</td>
<td>3%</td>
</tr>
<tr>
<td>How many of you think children are more at risk for pesticide exposure because their bodies are still developing?</td>
<td>16%</td>
<td>21%</td>
<td>4%</td>
</tr>
<tr>
<td>How many of you think pesticide exposure can only happen at work and not in the home?</td>
<td>11%</td>
<td>11%</td>
<td>0%</td>
</tr>
<tr>
<td>How many of you think you should wash your work clothes together with your family clothes?</td>
<td>9%</td>
<td>11%</td>
<td>2%</td>
</tr>
<tr>
<td>How many of you think an unborn baby can be affected by pesticide exposure?</td>
<td>14%</td>
<td>21%</td>
<td>7%</td>
</tr>
<tr>
<td>How many of you think removing your work boots and clothes before entering your house can protect your family from pesticide exposure?</td>
<td>16%</td>
<td>20%</td>
<td>4%</td>
</tr>
<tr>
<td>How many of you think you can prevent insects from entering your home by sealing cracks and keeping the house clean and dry?</td>
<td>16%</td>
<td>21%</td>
<td>4%</td>
</tr>
<tr>
<td><strong>Liked the training</strong></td>
<td></td>
<td></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>
BEHAVIOR CHANGE EVALUATIONS

The Behavioral Change Survey was conducted with 331 farmworkers that have never received a WPS nor a Heat Stress Prevention training previously. These are the results:

Overall, farmworkers have incorporated into their work routines healthy and safer practices learned after receiving a WPS and Heat Stress Prevention trainings in order to avoid a health risks due to pesticide and heat exposure.

- 33% of workers started using hats every day to work in order to avoid direct heat and pesticide exposure
- 30% of workers started to wear long pants every day to work in order to avoid pesticide exposure
- 28% of workers started wearing long-sleeve shirts every day to work to prevent pesticide exposure and over heat exposure
- 33% of workers started wearing light colored clothes to prevent over heating their body
- 29% of workers started wearing closed toe shoes every day to work to help prevent injuries and pesticide exposure through skin absorption
- 34% of workers started drinking more water every day at work in order to prevent dehydration
- 37% of workers started washing their hand before eating every day at work in order to prevent pesticide exposure
- 29% of workers increased their knowledge on believing that pesticides can hurt their health
- 47% of workers increased their knowledge on believing that heat can hurt their health

<table>
<thead>
<tr>
<th>IMPROVEMENTS</th>
<th>PRE</th>
<th>POST</th>
<th>IMPROVEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1: Average days worked in the fields</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Q2: Out of the days worked, how many did you wear a hat?</td>
<td>64%</td>
<td>97%</td>
<td>33%</td>
</tr>
<tr>
<td>Q3: Out of the days worked, how many did you wear long pants?</td>
<td>68%</td>
<td>98%</td>
<td>30%</td>
</tr>
<tr>
<td>Q4: Out of the days worked, how many did you wear a long sleeve shirt?</td>
<td>63%</td>
<td>92%</td>
<td>28%</td>
</tr>
<tr>
<td>Q5: Out of the days worked, how many did you wear light colored clothing?</td>
<td>59%</td>
<td>91%</td>
<td>33%</td>
</tr>
<tr>
<td>Q6: Out of the days worked, how many did you wear closed toe shoes?</td>
<td>68%</td>
<td>98%</td>
<td>29%</td>
</tr>
<tr>
<td>Q7: Out of the days worked, how many did you brought a container of water with you into the field?</td>
<td>56%</td>
<td>90%</td>
<td>34%</td>
</tr>
<tr>
<td>Q8: Out of the days worked, how many did you washed your hands before eating?</td>
<td>60%</td>
<td>97%</td>
<td>37%</td>
</tr>
</tbody>
</table>

Average Increased Behavior Change: 32%
It’s ironic that those who till the soil, cultivate and harvest the fruits, vegetables, and other foods that fill your tables with abundance have nothing left for themselves.”

- Cesar Chavez
AFOP NFTP sponsors two special events every year; the National Long Sleeve Shirt Drive and the Heat Stress Prevention Training Marathon are intended to raise awareness about the health hazards agricultural workers face.

<table>
<thead>
<tr>
<th>SPECIAL EVENTS</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Long-Sleeve Shirt Drive during National Farmworker Awareness Week (March)</td>
<td>no event</td>
<td>6,044</td>
<td>7,504</td>
<td>8,597</td>
<td>12,126</td>
<td>34,271</td>
</tr>
<tr>
<td>Heat Stress Prevention Training Marathon (July)</td>
<td>no event</td>
<td>1,466</td>
<td>2,008</td>
<td>2,895</td>
<td>2,621</td>
<td>8,990</td>
</tr>
</tbody>
</table>

The **National Long Sleeve Shirt Drive** is an event that is part of the National Farmworker Awareness Week during last week in March culminating with Cesar Chavez’s birthday. During this week NFTP and its network of trainers focus on the importance of pesticide safety education, in particular worker protection through the use of long sleeve shirts. The purpose of this week is to educate the public and the communities where farm workers live and work about the occupational hazards farm workers encounter, and rouse them into donating long sleeve shirts. The long sleeve shirts are collected nationwide during this week of action. And, as trainers provide pesticide safety education throughout the year long sleeve shirts are donated to farm workers, thus reinforcing how appropriate work clothing can help protect one’s person from pesticide exposure and a heat-related illness.

**HEAT STRESS PREVENTION TRAINING MARATHON**

NFTP’s **Heat Stress Prevention Training Marathon Week** is part of the OSHA’s annual Heat Stress Awareness Campaign for outdoor workers. During a week in July NFTP’s network of trainers concentrate their training efforts on providing Heat Stress Prevention Training and stressing the need for sufficient water consumption and breaks in the shade. Utilizing OSHA’s slogan **Water-Rest-Shade** as a reminder, farm workers receive pocket-sized brochures with information on how to prevent heat-related illnesses and what to do if someone falls victim to a heat-related illness, as well as a bandana with messaging to aid in protection.
THANK YOU!

AFOP’s National Farmworker Training Program would like to express its sincerest gratitude and appreciation to the funders, Association members, participating organizations, staff, volunteers, and most importantly the farm workers and the agricultural communities that made this work possible. We are honored to be able to provide vital health and occupational safety information to farm workers nationwide, none of which would be possible without your dedication and collaboration. It is because of your willingness and participation that NFTP is able to live up to its commitment of “Empowering the Farmworker Community through Health and Safety Education, Resources and Advocacy.”

NFTP Participating Organizations:

- Telamon Corporation – Alabama
- Campesinos Sin Fronteras – Arizona
- Proteus Incorporated – California
- New England Farm Workers Council – Connecticut
- Telamon Corporation – Delaware
- Farmworker Career Development Program/Indian River State College – Florida
- Telamon Corporation – Georgia
- Illinois Migrant Council – Illinois
- Proteus Incorporated – Indiana
- Proteus Incorporated – Iowa
- Motivation Education & Training Incorporated – Louisiana
- Eastern Maine Development Corporation – Maine
- Telamon Corporation – Maryland
- New England Farmworker Council – Massachusetts
- Motivation Education & Training Incorporated – Minnesota
- Mississippi Delta Council for Farm Workers Incorporated – Mississippi
- Rural Employment Opportunities - Montana
- Proteus Incorporated – Nebraska
- PathStone Corporation – New Jersey
- HELP New Mexico Incorporated – New Mexico
- PathStone Corporation – New York
- Student Action with Farmworkers – North Carolina
- Telamon Corporation – North Carolina
- Motivation Education & Training Incorporated – North Dakota
- Oklahoma Rural Opportunity Development Corporation – Oklahoma
- PathStone Corporation – Ohio
- PathStone Corporation – Pennsylvania
- PathStone Corporation – Puerto Rico
- New England Farmworker Council – Rhode Island
- Motivation Education & Training Incorporated – Texas
- PathStone Corporation – Vermont
- Telamon Corporation – Virginia
- Opportunities Industrialization Center – Washington
- Motivation Education & Training Incorporated – Wyoming
CONCLUSION

AFOP’s National Farmworker Training Program has undergone a number of transformations since its inception. However, one thing that remains intact is its proven track record to meet and exceed program goals. Data plays an integral part in running a successful program, from finding room for improvement to excelling at what is tried and true.

Through the process of collecting and analyzing data, AFOP has been able to illustrate the need for additional training, expand on training topics, support regulatory changes affecting agricultural workers, diversify funding, debunk myths concerning farm workers, and ultimately educate and advocate for farmworkers and their families. Although it’s not always the favorite part of the job, evaluation and data collection offer a critical analysis of/look at information from the 100,000 plus farm workers trained by AFOP’s NFTP, and ensure that our farmworkers are guaranteed the best product and services to fit their needs.
ASSOCIATION OF FARMWORKER OPPORTUNITY PROGRAMS
HEALTH & SAFETY PROGRAMS

1120 20th Street, N.W., Suite 300 South
Washington, D.C. 20036
P: 202-384-1771
E: forti@afop.org

@afophealth
@afophealth
@afophealth
@Farmworkers
@afophs
www.afop.org