

Pesticide Safety Education Program

SHIP Project Number: 2008-WO-0060
October 1, 2008 – December 31, 2010

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Columbia Basin Health Association

3/15/11

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Funding and support for this project has been provided by the State of Washington, Department of Labor & Industries, Safety & Health Investment Projects.

Columbia Basin Health Association is solely responsible for the content of and views expressed in this report and related materials unless they have been formally endorsed by the Washington State Department of Labor and Industries.

PART I

❖ Organization Profile

Columbia Basin Health Association (CBHA) is a non-profit community and migrant health center operating in four sites in a 3,687 square miles service area in Eastern Washington. CBHA offers medical, dental, vision care, mental health, as well as other enabling services. In 2009, CBHA saw 28,650 patients of which 13,830 were seasonal and migrant farmworkers. CBHA's mission statement is: "*The purpose of Columbia Basin Health Association is to provide equal access to quality health care to all persons regardless of age, sex, color, ethnicity, nationality origin, or the ability to pay.*" CBHA's visions "*to be a model of excellence in patient satisfaction in community and migrant health care and a community leader in initiating and developing collaborative relationships.*"

❖ Abstract

Pesticide safety education is a necessary component for agricultural worker and their families to reduce being exposed to pesticides and prevent acute and chronic effects of pesticide exposure. The Pesticide Safety Education Program was developed to provide pesticide safety education and outreach to the seasonal/migrant farmworker community using a variety of interactive methods including: community pesticide safety training sessions, grower pesticide safety training classes, community awareness events, one-on-one education, radio and newspaper education, and the production of a pesticide safety video. *Interactive* activities played an important role in increasing program participation by allowing attendee's to actively participate in the training sessions and improve overall pesticide safety knowledge retention.

In order to evaluate effectiveness of the project, a pre-survey and post-survey were developed and administer to measure pesticide prevention knowledge and behaviors before and after receiving pesticide safety training. Survey results indicated a combine 22.5% increase in pesticide safety behavioral change in the workplace and in the home environment.

❖ Purpose of Project

The *Pesticide Safety Education Program* was developed to raise awareness and provide effective pesticide safety education for seasonal and migrant agricultural workers. Strong emphasis was also placed on preventing secondary pesticide exposure to family members. A second purpose of the project is to determine effective methods to reach out to seasonal agricultural workers and increase knowledge on preventive behavior that will reduce exposure to pesticides. The target population for this program was seasonal and migrant agricultural workers residing in the Columbia Basin region which encompasses Adams County, the south portion of Grant County, and the north part of Franklin County. In total, the service area covers a 3,687 square miles with an estimated 20,000 migrant and seasonal farm worker population.

❖ Statement of the Results Evidence of the results

Based on survey data collected, the *Pesticide Safety Education Program* achieved success in accomplishing the objectives outlined for the program. The *Pesticide Safety Education Program* outcomes included:

- A tri-lingual pesticide safety educational video was produced in collaboration with the Washington State Department of Agriculture, Washington Department of Labor and Industries, and Environmental Protection Agency – Region 10. The purpose of this video is to provide a tool for educating low-literacy and non-literate agriculture workers on pesticide safety and was produced in Spanish, Mixteco, and English.
- A total of 3,033 agricultural workers participated in different aspects of the *Pesticide Safety Education Program*.
- Recruitment of 35 growers to participate in the project.
- *15 Community pesticide safety training* classes that meet Worker Protection Standard requirements were completed with a total of 302 agricultural workers that attended these classes.
- *39 Grower pesticide safety training* classes that meet Worker Protection Standard requirements were provided with a total of 651 workers trained.
- *60 Community Awareness* events were conducted in various communities through the project service area.
- 3 training sessions were provided to health care workers and outreach staff to raise awareness about pesticide safety and what they can do as service providers to educate farm workers regarding pesticide safety.
- 9 pesticide safety newspaper articles were published – 6 in local newspapers and 3 on *Farmworkers News*, a national publication.
- 51 radio educational programs were conducted on various pesticide safety topics.

❖ Measures to judge success

Wenatchee Valley College was a subcontractor for this project and was responsible with developing a survey tool to collect and analyze data to measure the effectiveness of interventions/activities done on behalf of the *Pesticide Safety Education Program*, and also to write a final program report. The *Pesticide Safety Educational Program* conducted a variety of outreach activities to raise awareness, provided trainings, and promoted pesticide safety among agricultural workers and their families. A pre-survey and post-survey was completed for participants attending pesticide safety training classes as a way to evaluate project success by measuring knowledge and behaviors change that reduce exposure to pesticides. The pre-survey was done before the participant attended the training session and the post-survey was completed 1 to 6 months after the participant attended the training. The surveys were intended to measure what workers learned about pesticides and how they were applying this information after having attended pesticide safety training. Some sample items measured included: how pesticides enter the body, how exposure occurs, knowledge of Worker Protection Standard requirement, symptoms of pesticide poisoning and what to do in a pesticide exposure related emergency.

A summary of the results of these surveys include:

- Participants were able to provide a greater number of accurate responses after receiving pesticide safety training in regards to knowledge gain in the following areas -
 - Knowledge about what pesticides are (119% increase)
 - How people get exposed to pesticides (95% increase)
 - How are pesticides harmful to your health (55% increase)
 - What is the Worker Protection Standard (95%)
 - How pesticides enter the body (34% increase)
 - Symptoms of pesticide poisoning (36% increase)
 - What to do in case of emergency (47% increase)
- Increase in worker reported pesticide safety preventive behavioral changes after the pesticide safety training included:
 - What to do to protect themselves from pesticide exposure at work (37% increase)

- What to do to protect themselves and their families from pesticide exposure at home (8% increase)

❖ Relevant processes and Lessons Learned

The *Pesticide Safety Education Program* Report provides a good overview of the program structure as well as lessons learned during the course of implementing this program. Some key items include:

- CBHA had difficulties in recruiting qualified staff that had been trained as pesticide safety educators/trainers. Instead, CBHA switched emphasized on recruiting candidates that possessed good outreach skills, a background of working with farmworkers, bilingual, and willing to work flexible schedule to carry out project activities. CBHA realized that arrangements would have to be made to train the candidates to be competent on providing pesticide safety education.
- Use of incentives to encourage worker participation in training sessions. One way to promote participation was to provide incentives such as hats, gloves, t-shirts, and safety glasses.
- Grower recruitment faced various challenges as growers felt that program staff was going to monitor, enforce, or report non-compliance regarding grower pesticide safety practices in the work place. Program staff worked to establish partnerships with growers and demonstrate that the focus of the program was to provide training and promote pesticide safety.
- Agricultural workers face many challenges that include language and low literacy. Cater trainings to the level of the workers. This included the use of a variety of interactive methods such as case discussions, role plays, pesticide bingo, and lots of visual aids. The idea for the production of the pesticide safety video was due to the fact that many program participants were non-literate.
- Partner with community agencies that serve the same population. By networking and establishing partnership with organizations that serve agricultural workers, CBHA was successful in reaching out to a large number of workers.
- Setting realistic time lines. Although this project was to be an 18-month project, various activities had challenges in meeting the time lines. The project was too compressed and many activities would have not yielded good results if they would have been rushed.

❖ Product Dissemination

The results of *Pesticide Safety Education Program* include the development of a pesticide safety video, the program report, training materials to increase awareness and promote prevention of pesticide related exposure for agricultural workers. The dissemination of these items is as follows:

- The pesticide safety video is available nationally through the EPA National Distribution Center and can be obtained by anyone across the country seeking a tool to train Spanish, Mixteco, and English-speaking agricultural workers on pesticide safety.
- The program report is being distributed to a group of approximately 150 stakeholders along with a copy of the pesticide safety video.
- The training materials and activities will be shared through conferences and trainings as well as technical support to organizations that are providing or seeking to provide pesticide safety training to agricultural workers. CBHA was asked to present at a national conference to service providers regarding pesticide safety. CBHA presented at the Western Migrant Stream Forum on Feb 16, 2011 in Oakland CA.
- Continue providing pesticide safety trainings in the CBHA service area.
- It is important to mention that the preferred source of communication within the agricultural workers is *word-of-mouth*, and it can be assumed that pesticide safety information will be exchanged among agricultural workers that never received pesticide safety information from the Pesticide Safety Education Program directly.

❖ Feedback

Feedback that has been received from the L & I Technical Advisor for the project as well as staff from the Washington State Department of Agriculture regarding *Pesticide Safety Education Program* work has been very positive. These individuals indicate that feedback that they have received from growers, community agencies, and agriculture workers has been that the *Pesticide Safety Education Program* is providing good trainings and providing good outreach to raise awareness on pesticide safety. Local community organizations and growers have continued to request training on pesticide safety indicating that the trainings are conducted at the level of the workers and made with practical day-to-day focus and ideas that workers can use.

Overall, the program report completed by Wenatchee Valley College provides feedback that the program and the way it was conducted was successful in reaching the seasonal agriculture workers – particularly Spanish and Mixteco-speaking workers.

CBHA's *Pesticide Safety Education Program* was also recently recognized for innovative outreach to farmworkers by being awarded the Sister Cecilia B. Abhold award by Health Outreach Partners – a national organization that focuses on issues affecting farmworkers.

❖ Project's promotion of prevention

Results of the survey indicated a clear relationship between pesticide safety knowledge gain during *interactive* presentations and pesticide safety preventive behaviors applied in the workplace and in the work environment. According to survey results, there is a 22.5% increase in safe practices among agricultural workers. These practice range from not entering areas recently applied with pesticides, knowing where to find pesticide application information in the workplace, not taking pesticides home, taking shoes off before entering the home, taking a shower or changing into clean clothes after work, washing work clothes separate, and more.

Results of the *Pesticide Safety Education Program* were to decrease pesticide exposure related injuries in the workplace. Examples of how workers can decrease work injuries due to pesticides include: workers knowing how to recognize pesticide treated areas, workers recognizing the symptoms of pesticide poisoning before acquiring severe effects, and knowing what to do in case of a pesticide contamination. Agricultural workers will reduce their probability of acquiring other related illness to pesticides by washing their hands at the workplace before eating and before and after using the bathroom, changing into clean clothing after their work day, and by using proper work clothing – hat, long sleeve T-shirt, long pants, covered toe shoes, and safety glasses. Along with minimizing exposure to pesticides agricultural workers, emphasis was also placed in reducing secondary exposure to pesticides of family members in the home environment. Agricultural workers implemented a daily routine when getting home from work – before picking children from babysitter change into clean clothing or having a clean towel to place child on shoulders, taking shoes off before entering the home, taking a shower right of after returning from work and entering the home or changing into clean clothes, placing and washing work clothes separate from other clothing, store pesticides away from the reach of children, not take work pesticides home, washing fruits and vegetables obtain from the farm, and create a home environment that reduces secondary exposure of family members.

❖ Uses

The products generated by the *Pesticide Safety Education Program* will continue to be used by CBHA and local growers to train seasonal agricultural workers regarding pesticide safety. We also expect the pesticide safety video that is available through the EPA to be used by growers and service providers across the country in training agricultural workers.

We have seen in our local community, that childcare providers have been using the information and the video to provide trainings to parents on pesticide safety. Health care providers can use this information to raise awareness on pesticide safety with patients that work in agriculture. For example, health care outreach workers have been using this information to train women who are pregnant and work in agriculture to raise awareness on pesticide exposure and prevention.

Additional Information

<p>Project Type</p> <p><input type="checkbox"/> Best Practice</p> <p><input type="checkbox"/> Technical Innovation</p> <p><input checked="" type="checkbox"/> Training and Education Development</p> <p><input type="checkbox"/> Event</p> <p><input type="checkbox"/> Intervention</p> <p><input type="checkbox"/> Research</p> <p><input type="checkbox"/> Other (Explain):</p>	<p>Industry Classification (check industry(s) this project reached directly)</p> <p><input checked="" type="checkbox"/> 11 Agriculture, Forestry, Fishing and Hunting</p> <p><input type="checkbox"/> 21 Mining</p> <p><input type="checkbox"/> 22 Utilities</p> <p><input type="checkbox"/> 23 Construction</p> <p><input type="checkbox"/> 31-33 Manufacturing</p> <p><input type="checkbox"/> 42 Wholesale Trade</p> <p><input type="checkbox"/> 44-45 Retail Trade</p> <p><input type="checkbox"/> 48-49 Transportation and Warehousing</p> <p><input type="checkbox"/> 51 Information</p> <p><input type="checkbox"/> 52 Finance and Insurance</p> <p><input type="checkbox"/> 53 Real Estate and Rental and Leasing</p> <p><input type="checkbox"/> 54 Professional, Scientific, and Technical Services</p> <p><input type="checkbox"/> 55 Management of Companies and Enterprises</p> <p><input type="checkbox"/> 56 Administrative and Support and Waste Management and Remediation Services</p> <p><input type="checkbox"/> 61 Educational Services</p> <p><input type="checkbox"/> 62 Health Care and Social Assistance</p> <p><input type="checkbox"/> 71 Arts, Entertainment, and Recreation</p> <p><input type="checkbox"/> 72 Accommodation and Food Services</p> <p><input type="checkbox"/> 81 Other Services (except Public Administration)</p> <p><input type="checkbox"/> 92 Public Administration</p>																
<p>Target Audience:</p> <p><i>Seasonal agricultural workers and their families</i></p>																	
<p>Languages:</p> <p><i>Spanish, Mixteco, and English</i></p>																	
<p>Please provide the following information - (information may not apply to all projects)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 35%;"># classes/events:</td> <td style="text-align: center;">54/60</td> </tr> <tr> <td># hours trained</td> <td style="text-align: center;">-----</td> </tr> <tr> <td># companies participating in project</td> <td style="text-align: center;">35</td> </tr> <tr> <td># students under 18</td> <td style="text-align: center;">-----</td> </tr> <tr> <td># workers</td> <td style="text-align: center;">953</td> </tr> <tr> <td># companies represented</td> <td style="text-align: center;">53</td> </tr> <tr> <td># reached (if awareness activities)</td> <td style="text-align: center;">2,080</td> </tr> <tr> <td>Total reached</td> <td style="text-align: center;">3,033</td> </tr> </table>	# classes/events:	54/60	# hours trained	-----	# companies participating in project	35	# students under 18	-----	# workers	953	# companies represented	53	# reached (if awareness activities)	2,080	Total reached	3,033	<p>List, by number above, industries that project products could potentially be applied to.</p> <p>62 Health Care and Social Assistance</p> <p>72 Accommodation and Food Services</p>
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<p>Have there been requests for project products from external sources? If Yes, please indicate sources of requests</p> <ul style="list-style-type: none"> • <i>Requests from growers and community service providers (day care centers, skills development centers, and school PACs) for pesticide safety training have been ongoing.</i> • <i>CBHA was asked to present at a national conference focused on health care and farmworkers</i> • <i>Other health centers have requested information on the program and how activities are carried out</i> 	<p>Potential impact (in number of persons or companies) after life of project?</p> <p>Through the life of the project, approximately 3,033 agricultural workers participated in the program.</p>																

PART II

SAFETY AND HEALTH INVESTMENT PROJECTS
SHIP Final Expenditure Report
Budget Summary

Project Title:	Pesticide Safety Education Program		
Project #:	2008-WO-0060	Report Date:	March 15, 2011
Contact Person:	Leo Gaeta	Contact #:	(509) 488-5256
Start Date:	October 1, 2008	Project Completion Date:	December 31, 2010

1.	Total budget for the project		\$ 415,615.00
2.	Total SHIP Grant Award		\$ 319,573.00
3.	Total of SHIP Funds Used		\$ 319,573.00
4.	Budget Modifications (if applicable)		\$ 00
5.	Total In-kind contributions		\$ 96,042.00
6.	Total Expenditures (Lines 3 + 4 + 5)		\$ 415,615.00

Instructions:

- Complete the Supplemental Schedule (Budget) form first (on the next page).
- The final report must include all expenditures from date of completion of interim report through termination date of grant
- Indicate period covered by report by specifying the inclusive dates
- Report and itemize all expenditures during specified reporting period per the attached supplemental schedules
- Forms must be signed by authorized persons (see last page)
- Forward one copy of the report to **(Name), SHIP Project Manager, PO Box 44612, Olympia, WA 98504-4612.**

SAFETY AND HEALTH INVESTMENT PROJECTS
SHIP Final Expenditure Report
Supplemental Schedules (Budget)

Project Title:	Pesticide Safety Education Program	Report Date:	March 15, 2011
Project # :	2008-WO-0060	Contact #:	(509) 488-5256
Contact Person:	Leo Gaeta		
Total Award \$:	\$319,573.00		

ITEMIZED BUDGET -- How were SHIP award funds used to achieve the purpose or your project?

	Budgeted for Project	Amount Paid Out	Difference
A. PERSONNEL	\$176,451.00	\$176,433.00	\$ 18.00

Explanation for Difference and other relevant information:

Additional funds were spent on the program coordinator position to carry out end of project tasks.

	Budgeted for Project	Amount Paid Out	Difference
B. SUBCONTRACTOR	\$104,827.00	\$104,383.00	\$ 444.00

Explanation for Difference and other relevant information:

There was a small cost savings in supply costs from one of the subcontractors.

	Budgeted for Project	Amount Paid Out	Difference
C. TRAVEL	\$ 18,370.00	\$ 18,015.00	\$ 355.00

Explanation for Difference and other relevant information:

There was a small savings regarding travel costs.

	Budgeted for Project	Amount Paid Out	Difference
D. SUPPLIES	\$ 71,184.00	\$ 71,699.00	(\$ 515.00)

Explanation for Difference and other relevant information:

There were additional costs incurred in conducting program activities.

	Budgeted for Project	Amount Paid Out	Difference
E. PUBLICATIONS	\$ 7,000.00	\$ 8,148.00	(\$1,148.00)

Explanation for Difference and other relevant information:

The production of the pesticide safety video incurred additional costs to have the video produced in four languages (Spanish, English, and Mixteco Alto and Bajo).

	Budgeted for Project	Amount Paid Out	Difference
TOTAL DIRECT COSTS	\$377,832.00	\$378,678.00	(\$ 846.00)

	Budgeted for Project	Amount Paid Out	Difference
INDIRECT COSTS	\$37,783.00	\$36,937.00	\$ 846.00

	Budgeted for Project	Amount Paid Out	Difference
TOTAL SHIP BUDGET	\$415,615.00	\$415,615.00	\$ 0.00

	Budgeted for Project	Amount Paid Out	Difference
F. IN-KIND	\$ 96,042.00	\$ 99,413.00	(\$3,371.00)

Explanation for Difference:

Additional funding was provided by EPA (\$2,630) to help in the production of the pesticide safety video. Additional in-kind time was provided by the program director to manage project activities (\$741).

PART III

Attachments:

Provide resources such as written material, training packages, or video/audio tapes, curriculum information, etc produced under the grant.

Also include copies of publications, papers given at conferences, etc.

This information should also be provided on a CD or DVD for inclusion in the file.

REMINDER!!: All products produced, whether by the grantee or a subcontractor to the grantee, as a result of a SHIP grant are in the public domain and can not be copyrighted, patented, claimed as trade secrets, or otherwise restricted in any way.