A Food Safety Education Program for Farm Workers and Their Families

Elizabeth A. Bihn and Robert B. Gravani
National GAPs Program, Cornell University
Farm Worker Health and Hygiene

• Critical to the safety of fresh fruits and vegetables.
  – Harvesting
  – Culling
  – Packing
  – Only people to touch produce before consumers

• Health issues exist
  – Exposure to certain diseases more often
  – Access to medical services
National GAPs Program

- Reduce microbial risks in fruits and vegetables.
- Collaborators in 25 states.
National GAPs Program Model

GAPsNET

Extension
- Exhibits

Education
- Grower and Packer Education Program

Grower and Packer Education Program
- Grower Self Assessment
- Growers Guide

Train the Trainer Education Program
- Resource Manual
- Presentation CD

Research
- Water

Extension
- Exhibits

Farm worker Education Program
- Video
- Books
- Posters
- Magnets
- Coloring Book
- Photo novels
- Field Hygiene Book

GAPsNET

GAPsNET

GAPsNET
Farm Worker Education and Training: A Foundation of GAPs Implementation

• 2000 began telling growers they needed to train their workers about food safety

• Growers not confident and not prepared to teach people about hygiene issues…. “Can’t you make a video or something?”

• 2001 funding from CSREES-USDA
Farm Worker Education in the Context of GAPs

- Language barrier: employer and employee.
- Cultural norms clash with required practices.
- Various arrival times during season.
- Differences in employer requirements.
NY Farm Worker Survey

- 689 surveys collected
- Between June and October, 2002
- Determine worker understanding of personal hygiene practices
- Assess the current status of sanitary facilities on farms & in packing houses in New York
- Verbal interviews by 6 students
**FARM WORKER SURVEY**

**Language of Survey**

<table>
<thead>
<tr>
<th>Language</th>
<th>No.</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>54</td>
<td>7.8</td>
</tr>
<tr>
<td>Spanish</td>
<td>602</td>
<td>87.4</td>
</tr>
<tr>
<td>Creole</td>
<td>33</td>
<td>4.8</td>
</tr>
<tr>
<td>Total</td>
<td>689</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Bilingual Materials

• Primarily translated into Spanish, but also have materials in Hmong and Chinese.

• Significant time, editing, and at times, confusion.
  – Many Spanish speaking workers from different Spanish speaking countries, areas, etc.
  – Complete dependence on others and inability to understand a single translated word (written and spoken).
A Desire to Learn

Would you be interested in receiving information and training on proper hand washing for your own protection and to protect the fruits and vegetables you harvest and pack?

73.7 % Yes
26.3 % No
LÁVESE LAS MANOS FRECUENTEMENTE

ANTES Y DESPUES DE USAR EL SANITARIO (BAÑO), COMER, BEBER, O FUMAR

NO
NO

SI
YES

BEFORE AND AFTER USING THE BATHROOM, EATING, DRINKING, OR SMOKING

WASH YOUR HANDS OFTEN!

Original hand washing poster
USE TOILET FACILITIES IN FIELD

NO

YES

SI

USE LOS BAÑOS DESPONIBLE EN EL CAMPO

LÁVESE LOS MANOS FRECUENTEMENTE

ANTES Y DESPUÉS DE USAR EL BAÑO, COMER, BEBER, O FUMAR

BEFORE AND AFTER USING THE TOILET, EATING, DRINKING, OR SMOKING

WASH YOUR HANDS OFTEN!

Final Posters
A perfect opportunity arises from a real on-farm concern

Growers and Packers have often commented that they see USED toilet paper deposited in the corner of the bathroom or portable toilet.

In a field toilet situation, this paper can be dragged out into the field on the bottom of boots. So, we decided to ask the workers…
Where do you put used toilet paper?

<table>
<thead>
<tr>
<th>Location</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Next to the toilet</td>
<td>1.6</td>
</tr>
<tr>
<td>In a trash can</td>
<td>44.8</td>
</tr>
<tr>
<td>In toilet</td>
<td>46.6</td>
</tr>
<tr>
<td>On ground</td>
<td>0.9</td>
</tr>
<tr>
<td>Other places</td>
<td>0.2</td>
</tr>
</tbody>
</table>

Disposing of used toilet paper is a critical issue for sanitation and safety.
One Educational Approach

POR FAVOR, DEPOSITE EL PAPEL HIGIÉNICO USADO DENTRO DEL INODORO

EL PAPEL HIGIÉNICO NO ATORA LOS INODOROS

TOILET PAPER WILL NOT OBSTRUCT TOILETS

PLEASE PUT USED TOILET PAPER IN THE TOILET

This poster was produced by the Good Agricultural Practices Program at Cornell University with support from USDA-CSREES and FDA Agreement No. 5S-4158-99-21.
Training Video

- Re-translated as a result of focus group testing.
- One focus group wanted to see more information about health related issues such as hepatitis A.
Coloring Book Development

• Create something for farm worker children as part of our farm worker education program.

• Since children are more susceptible to foodborne illnesses, teaching them proper hand washing and food preparation is important.

• The coloring book needed to be bilingual and cover a broad age range (5-10 years).
Children’s coloring book

Fun Fruit & Very Vegetable Tour

By Elizabeth A. Bihn, Donna L. Scott, Robert B. Grovani, and Karin Rosberg
Illustrated by Mark Kogut • Translation to Spanish by Laura E. Acuña-Maldonado
National Good Agricultural Practices Program
Department of Food Science • Cornell University • Ithaca, NY 14853

Un Paseo Divertido al Mundo de las Frutas y Verduras

Por Elizabeth A. Bihn, Donna L. Scott, Robert B. Grovani, y Karin Rosberg
Ilustraciones de Mark Kogut
Traducción al Español por Laura E. Acuña-Maldonado
Programa Nacional “Buenas Prácticas Agrícolas”
Departamento de Ciencias de los Alimentos • Universidad de Cornell • Ithaca, NY 14853

72 pages with an interesting storyline and activities
Focus Groups

- Five summer education programs with children ranging in age from 3-16 years old.
- 96 children were given an 11 question survey along with the demonstration coloring book and a package of crayons
  - One survey was discarded and not used in calculations due to incompleteness.
- Nine children were too young to take the survey, so were asked verbal questions.
Selected Child Survey Results

- **Do you like this coloring book?**
  Yes: 91 students (95.7%)  No: 4 students (4.3%)

- **Is the coloring book fun?**
  Yes: 87 students (91.6%)  No: 8 students (8.4%)
Selected Child Survey Results

- **What pages do you like the best?**
  - Varied responses but the US map, word search, and wash the bacteria down the drain received the most positive responses.
  - Many children also responded all or most

- **What pages do you not like?**
  - Varied responses but no one page got more than 2 responses in any single classroom.
What did you learn from this coloring book?

“How to stay healthy and kill germs”

“How about food and it’s hard to tell what’s good/bad bacteria”

“Vegetables help you grow and everything has bacteria”

“You need to wash your hands”

“Wash your hands for 20 seconds”

“Some fruits and vegetables are transported by trucks”

“Have clean hands when you eat or your food will be dirty; wash with soap”
Selected Child Survey Results

- **Would you like to show the coloring book to your mom, dad or other family members?**
  
  Yes: 86 students (90.5%)   
  No: 7 students (7.4%)   
  No answer: 2 students (2.1%)  

- **Does your mom or dad work on a farm?**
  
  Yes: 49 students (51.6%)*   
  No: 45 students (47.4%)   
  No answer: 1 student (1%)  

*Many children commented on this response so this number may be higher than reported.*
Focus Groups and What We Learned

- Gender differences
- Size and composition matters
- Literacy is an issue
- Workers are concerned
- Desire for more materials
Farm Worker Education and Training Materials
Evaluation and Evaluation Design

- A serious need to evaluate educational materials post development to determine effectiveness and how they are being used.
- Move beyond quantitative surveys to qualitative interviews.
- New information hopefully will provide additional insight into need.
Welcome to the GAPsNET
Good Agricultural Practices Network for Education and Training

Home

View National GAPs Educational Materials
Research & Extension Publications Database
Events Calendar
Web Links
Collaborators
Who We Are & Contacts

Food Safety Begins on the Farm
Updated 7/26/06

Good Agricultural Practices Network for Education and Training
Summary

• Know the target audience by talking to the target audience. Give them what they need.
• Test the educational materials/program with the target audience.
• Build evaluation into the project at the very beginning so that the impact can be determined. Better focus new resources.
Thank you for your attention.