Project Be Smart Be Safe: Bringing Pesticide Right-to-Know Information to Farmworkers

Shelley Davis
Deputy Director
Farmworker Justice
1126 16th Street NW, Suite 270
Washington, DC 20036
Phone: 202-293-5420
sdavis@nclr.org

In my talk today, I will address:

- Farmworker demographics and short- and long-term health effects of pesticide exposure
- Key elements of a "right-to-know" program
- Essential components of a low literacy crop booklet
- Our accomplishments

Farmworker Demographics

- 2.5 million hired farmworkers
  - 81% speak Spanish
  - 18% speak English
  - others speak Haitian Creole, Mixteco, Kanjobal
- Median years of schooling: 6

Experiencing Acute Effects that May Be Due to Pesticide Exposure

In a Washington State study, 75% of farmworkers reported experiencing mild to moderate acute symptoms that they attributed to pesticide exposure.

Chronic Health Effects Associated with Pesticide Exposure

EPA and California have identified scores of active ingredients as possible or probable carcinogens, teratogens, neurotoxins and/or endocrine disruptors.

Study of cancer among UFW members and retirees (Mills 2000) compared people who have ever been in UFW to all Latinos living in CA:

- Farmworkers experienced elevated rates of leukemia (OR: 1.69) and brain cancer (OR: 1.57), both of which are associated with occupational exposure to pesticides.

Birth Defects, Miscarriages and Fetal Deaths Associated with Pesticide Exposure

A study of birth defects rates in 210,000 live births in Minnesota (Garry et al 2002a) found:

- 30 per 100,000 live births in offspring of pesticide applicators
- 18.3 per 100,000 live births among Twin Cities residents

A related study (Garry et al 2002b) found:

- higher rates of miscarriages and fetal deaths among spouses of pesticide applicators than non-agricultural workers
- higher rates during spray season

Research: Pesticide Exposure and Parkinson's Disease

PD is a degenerative brain disease that affects movement and can lead to paralysis:

- Agricultural Health Study: applicators who used the weed killer paraquat had two to three times the normal risk of PD.
- Exposure to the pesticides maneb and dieldrin (persistent but now discontinued) has been linked to PD.

Pesticides and Neurobehavioral Effects

Findings from a study comparing Mexican immigrants in farmwork to those in the hotel and restaurant industries (Rothlein et al. 2006) found:

- Poorer neurobehavioral performance by farmworkers than by other workers
- A positive correlation between urinary OP metabolite levels and poorer performance on some neurobehavioral tests

Farmworkers Lack a "Right-to-Know" About the Specific Chemical Hazards They Face on the Job

- Current minimum required protections are set forth in Worker Protection Standard (WPS) issued by the EPA in 1992.
- WPS does not give farmworkers access to information about the health effects of specific pesticides to which they are exposed on the job.

Farmworkers' Gaps In Knowledge

Most workers know the signs of acute poisoning but many do not know the long-term consequences of pesticide exposure (Elmore and Arcury 2001).

What's Missing: The "Right-To-Know"

- OSHA's Hazard Communication Standard (US DOL 1990) does NOT apply to farmworkers and pesticides.
- EPA proposed a Hazard Communication regulation in 1992 – but never adopted one.
- In other industries, educating workers and employers about specific on-the-job chemical hazards has contributed to increased workplace safety.

Creating a Hazard Communication Project: Be Smart Be Safe

FJ and Campesinos Sin Fronteras (CSF) of Yuma, AZ, conducted a Right-To-Know project from October 2004 to March 2006:

- 2,800 lettuce and citrus workers were trained about the WPS and health effects associated with the specific pesticides used in their workplaces.
- A new train-the-trainer curriculum for *Promotores de Salud* was created.
- 40 employers and supervisors were trained on the health effects associated with the pesticides they use.

Creating a Low Literacy Crop Booklet

A low literacy crop booklet was created with pictures and limited text describing long- and short-term health risks from pesticides such as dimethoate (OP), lannate (CB), and maneb (possible carcinogen) used on lettuce.

Clopyralid (Stinger)

When Used

Apply to growing weeds

Re-Enter Field After

12 Hours

Common Acute Symptoms

Eye Irritation | Skin Rashes | Nose & Throat Irritation

Cyprodinil (Switch 62.5)

When Used

Post-Planting

Re-Enter Field After

12 Hours

Common Acute Symptoms

Eye Irritation | Skin Rashes

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Common Acute Symptoms

Eye Irritation | Skin Rashes

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Using a PSA to Enhance the *Promotores'* Message

- During March 2006, FJ arranged for a public service announcement (PSA) to be aired on a local Spanish-language radio station.
- The 60-second PSA explains the precautions workers should take when working around pesticides and the common symptoms of acute pesticide poisoning.

Using a PSA to Enhance the *Promotores'* Message (cont'd)

- *Promotores* reported that approximately 60 workers recognized the name of their organization and asked if they were the ones who were airing the pesticide radio spots.
- The *promotores* felt the workers gave more credence to the *promotores'* presentations because they connected the *promotores* with the radio PSA.

Evaluating Changes in Farmworkers' Knowledge, Attitudes, Beliefs and Behaviors

- In October 2005, the *promotores* administered a pre-intervention survey to 100 Yuma County lettuce workers.
- The workers received two months of hazard communication education and outreach.
- In December 2005, another 100 workers were surveyed to measure the effects of the *promotores* activities.
- Notable results included:

	Pre-test	Post-test
"Always" washing hands before eating	53%	86%
"Never" washing hands before eating	42%	10%
Removing boots before entering home	4%	78%

Evaluating Changes in Farmworkers' Knowledge, Attitudes, Beliefs and Behaviors (cont'd)

- Responses to questions that did not change significantly between surveys flag areas that require further education. For example:
  - 46% thought they had never been exposed to pesticides
  - half the workers said they waited up to two hours to bathe after work; only 35% of workers reported bathing immediately upon returning home
  - 7 - 10% said that they washed family and work clothes together

CONCLUSIONS

- Farmworkers want to know the short- and long- term health effects associated with the pesticides used at their workplaces.
- This information can be provided in crop booklets that rely principally on pictures.
- Providing health effects information increases the likelihood that farmworkers will take appropriate safety precautions.

References:

Elmore, RC Arcury, TA. Pesticide Exposure Beliefs Among Latino Farmworkers in North Carolina's Christmas Tree Industry. *American Journal of Industrial Medicine* 40:153-160 (2001).

Garry VF, Harkins ME, Erickson LL, Long-Simpson LK, Holland SE, Burroughs BL. Birth defects, season of conception, and sex of children born to pesticide applicators living in the Red River Valley of Minnesota, USA. *Environmental Health Perspectives* 110:155–159 (2002a).

Garry VF, Harkins M, Lyubimov A, Erickson L, Long L. Reproductive outcomes in the women of the Red River Valley of the north. I. The spouses of pesticide applicators: pregnancy loss, age at menarche, and exposures to pesticides. *Journal of Toxicology and Environmental Health, Part A* 65:769–786 (2002b).

Jackson K. *Hidden Costs: Farmworkers Sacrifice Their Health to Put Food on Our Tables*. Colorado Rural Legal Services (2002).

Kamel F, Tanner C, Umbach D, Hoppin J, Alavanja M, Blair A, Comyns K, Goldman S, Korell M, Langston J, Ross G, Sandler D. Pesticide exposure and self-reported Parkinson's disease in the agricultural health study. *American Journal of Epidemiology* 165(4):364-74 (2006).

References (cont'd):

Mills PK, Kwong S. Cancer Incidence in the United Farmworkers of America 1987 – 1997. *American Journal of Industrial Medicine* 40:596-603 (2001).

Rothlein J, Rohlman D, Lasarev M, Phillips J, Muniz J, McCauley L. Organophosphate Pesticide Exposure and Neurobehavioral Performance in Agricultural and Nonagricultural Hispanic Workers. *Environmental Health Perspectives* 114:691-696 (2006).

U.S. Department of Labor (US DOL. *Hazard Communications Standard* (1990).

U.S. Environmental Protection Agency (US EPA. *Worker Protection Standard, 40 C.F.R. Part 170 (*1992).

U.S. Environmental Protection Agency (US EPA). *Worker Protection Standard Economic Impact Statement (*1993).

U.S. General Accounting Office (US GAO). *Occupational Safety and Health: Employers Experiences in Complying with the Hazard Communication Standard* GAO/HRD – 92 – 63BR (1992).

Villarejo, D., Lighthall D., Williams, D. III, Souter, A., Mines R., Bade, B., Samuels, S., McCurdy, S.A., *Suffering in Silence: A Report on the Health of California's Agricultural Workers.* California Institute for Rural Studies and the California Endowment (2000).

Washington State Department of Health. *Summary of Focus Group Discussion* (2003).