



**EYE ON FARMWORKER HEALTH:
CURRENT DEVELOPMENTS IN RESEARCH AND POLICY**
(FORMERLY FJ EYEOPENER)

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It is with profound sadness that we announce the passing of Shelley Davis, Deputy Director of Farmworker Justice and co-editor of this newsletter, on December 12, 2008. To read a tribute to Shelley and her remarkable work, please see our website at www.farmworkerjustice.org

Welcome to Farmworker Justice's electronic newsletter covering recent developments in health-related research and policy relevant to migrant farmworkers in the US. Please feel free to send comments, questions, or suggestions for future issues to the address provided at the end of the newsletter. A PDF version of this newsletter is available at <http://www.farmworkerjustice.org/Health&Safety/resources1.htm>.

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1. EPA Proposes Changes in the Regulation of Fumigants

By Shelley Davis

The EPA has proposed changes in the labels of five fumigants, which are highly toxic pesticides injected in the soil in a gaseous form. These five highly toxic pesticides are chloropicrin, metam sodium, metam potassium, dazomet and methyl bromide. Methyl bromide, which is one of the most highly toxic of the fumigants, is a

neurotoxin and has been associated with cancer and birth defects in animal studies. It was also slated to be eliminated worldwide by 2005 under the Montreal Protocol because of its ozone-depleting characteristics. However, it remains in widespread use in California and Florida under the “emergency exception” provision of that treaty. This group of fumigants has caused many injuries to both farmworkers and community residents living near application sites.

Some of the new measures proposed by EPA will increase protections for workers and the affected community. See Fumigants Cluster Assessment (FCA) Re-registration Eligibility Decisions, Docket Nos. EPA-HQ-OPP-2005-0125, EPA-HQ-OPP-2007-0350, EPA-HQ-OPP-2005-0123, EPA-HQ-OPP-2005-0128.

Some of the protections are significant improvements, and some will leave workers and bystanders at risk. For example, while buffer zones will be required for many applications, many buffer zones will not be large enough to eliminate the risks. Applicators would also be required to submit a Notice of Intent to use a fumigant. But these notices are not yet required to be made publicly available. If they were, they would provide valuable information to medical providers and first responders in the event of a poisoning incident. Other measures, such as fumigant management plans and air monitoring, will assist state agencies in enforcing the new protections.

In light of the high toxicity of these pesticides, improved protections are needed to reduce the number of injuries among farmworkers and community residents living near sites treated with soil fumigants. Final regulations are expected to be issued within the next six months.

2. Indigenous Farmworkers in Oregon Report Workplace Discrimination and Occupational Health Hazards

Farquhar S, Samples J, Ventura S, Davis S, Abernathy M, McCauley L, Cuilwik N, Shadbeh N (2008). Promoting the occupational health of indigenous farmworkers. *Journal of Immigrant and Minority Health* 10:269-280.

Farmworkers in the United States are largely immigrants, with increasing numbers coming from indigenous communities in Mexico and Guatemala in recent years. Individuals from indigenous communities speak a variety of languages, such as Mixteco, Triqui, and Zapateco, and are frequently not fluent in either Spanish or English. As a result, they particularly difficult to reach with information regarding health and safety on the job. A study funded by the National Institute of Environmental Health Sciences (NIEHS) and the National Institute for Occupational Safety and Health (NIOSH) used focus groups and outreach efforts in order to learn more about the experiences and needs of this distinct population. In Oregon, where this study was conducted, workers from indigenous communities make up about 40% of the migrant farmworker population.

The health of indigenous farmworkers is difficult to study, especially because of their varied cultures and many languages. The project *Promoting the Occupational Health of Indigenous Farmworkers* was developed by a team of partners including indigenous-

language speaking community educators, farmworker advocates, labor union representatives, environmental scientists and health care providers. The goal of the four-year project is to develop community-based strategies to meet the needs of indigenous farmworkers, improve their understanding of the risks associated with their work, and increase their access to economic, health, and social services.

The project began with six focus groups with farmworkers from indigenous communities who were employed in various types of agricultural work. Facilitators of the groups carefully selected and translated the questions the workers were asked to ensure that they were relevant to the farmworkers' experiences and needs. Facilitators were bilingual in Spanish and either Mixteco or Triqui. Results of the focus groups revealed two overarching issues of importance to the participants: (1) discrimination and lack of respect, and (2) lack of control over occupational health hazards.

All the focus groups discussed discrimination, which is exacerbated by the language and cultural differences of indigenous workers. Workers felt their needs and concerns were dismissed or not taken seriously by their employers because of communication barriers. Additionally, information available from health educators, the media, employers, or training sessions was usually not useful to these workers because it is rarely available in indigenous languages.

The other major focus group issue was exposure to occupational hazards and lack of proper training. The farmworkers saw a link between pesticides and certain symptoms and illnesses that occurred, however, their need for income overrode their fear of the effects of pesticides. They were exposed to other hazards related to their work such as heavy lifting, operating machinery, and a lack of sanitation and drinking water, but felt that they were not sufficiently trained to properly use machinery or in safety procedures. Workers also reported insufficient protective equipment at their worksites and pressure to work harder than is safe or healthy. Additionally, some workers felt that reporting an injury would cause them to lose their job, and so they hid or ignored injuries.

The themes identified in this study mirror the findings of similar studies with farmworkers. Lack of information and training in languages workers understand creates a hazardous situation throughout the agricultural workplace. The indigenous languages of Mexico and Central America do not have a written tradition and are distinct from Spanish. To bridge this gap, the next steps of this project include creating indigenous language multi-media materials on a variety of topics, including information on how workers can complain if they are underpaid, forced to work a field recently sprayed with pesticides, or are not allowed to go home if they become ill while at work. Project partners are also hiring bilingual and trilingual *promotores/as* to facilitate communication among stakeholders working for improved health status of indigenous farmworkers.

3. Farmworkers Who Receive Personal Protective Equipment Are More Likely to Take Measures to Reduce Take-Home Exposure

Strong LL, Thompson B, Koepsell TD, Meischke H (2008). Factors Associated with Pesticide Safety Practices in Farmworkers. *American Journal of Industrial Medicine* 51:69-81.

Exposure to pesticides is a hazard not only for farmworkers who work in the fields, but for their families as well. A number of studies have found higher levels of pesticide residues in farmworker homes, as well as higher levels of pesticide metabolites in the urine of farmworker family members, including children, than in the general population. The protections for workers required by the Environmental Protection Agency include training on ways to reduce both occupational and “take-home” exposure (residues transported from the workplace to the home on workers’ skin, clothes, boots, etc.). There is some evidence to support that following these recommendations reduces both types of exposure. The authors of the study reviewed here wanted to identify factors predicting farmworkers’ adoption of these recommended pesticide safety practices in the home and at work

The study was conducted in Washington State with 554 farmworkers, primarily Hispanic (89%). Workers were asked about their beliefs and perceptions regarding pesticide exposure in the workplace and home, and the possible health effects for them and their children. They were also asked about their worksite, access to protective gear, and pesticide safety training. Their responses were then compared with their responses to questions about their use of personal protective gear at work and about their adherence to a total of six recommended practices for reducing take-home exposure.

The percentage of workers who reported rarely or never wearing protective clothing at work (hat, gloves, protective boots and eyewear) varied from 14% for hats to 57% for protective eyewear. Most (83%) workers always or usually washed work clothes separately from household laundry, but 30% did not remove their work footwear before entering the house. The rates of compliance for the other four behaviors (washing hands, bathing, and changing out of work clothes right after work; washing work clothes after each wearing) fell between those two extremes.

Comparing the reported behaviors with the responses to the workplace questions revealed that being provided with protective clothing was by far the most important predictor of using it. Training was also correlated with use of PPE, but not as strongly. Pesticide handlers and those who had received training were more likely to take precautions against take-home exposure, as were those who lived in labor camps. Men were less likely than women to take home protective measures.

These findings suggest that increased use of PPE by farmworkers will likely occur if they are not only trained in reducing their exposures, but also provided with PPE. It is possible that economic or availability barriers to purchasing their own PPE is a factor for many workers. On the other hand, workers may be more likely to accept safety behaviors as the norm when PPE is readily available, or when they see others taking such precautions (such as might happen in a labor camp). Information about the take-home pathways should be included in workplace trainings to encourage workers to take recommended precautions. The importance of reducing take-home

residues to limit children's exposure in the home should be reinforced at every opportunity.

4. Skin Rash increases Workers' Odds of Developing Green Tobacco Sickness

Arcury TA, Vallejos QM, Schulz MR, Feldman SR, Fleischer, Jr AB, Verma A, Quandt SA (2008). Green Tobacco Sickness and Skin Integrity among Migrant Latino Farmworkers. *American Journal of Industrial Medicine* 51(3): 195-203.

Green tobacco sickness, or GTS, is a common occupational health problem for tobacco farmworkers, affecting as many as 25% of workers at some point in a season. GTS is a form of acute nicotine poisoning that occurs when workers absorb nicotine through the skin while working in the fields, especially when the tobacco is wet. GTS is characterized by a constellation of symptoms including nausea or vomiting and headache or dizziness. While not usually a medical emergency, GTS is debilitating and can lead to lost work time. The present study was undertaken to expand knowledge of risk factors to inform occupational safety training to reduce its impact on farmworkers. In particular this study looked at the possibility that skin conditions such as cuts, abrasions and rashes might increase the risk of GTS by facilitating nicotine absorption.

The study included 304 farmworkers who were asked about their work activities and practices, skin problems and any symptoms of GTS they might have experienced during a seven-day period before the interview. Workers self-reported skin problems such as itching, rash, and minor wounds, while contact dermatitis and traumatic skin lesions were diagnosed by a dermatologist. Almost half of the workers reported at least one skin problem during the season covered by the study. Nearly 20% of workers met the definition of GTS at least once during the season (all workers who reported having GTS symptoms also had worked in tobacco during the same period).

The three self-reported symptoms (itching, rash, minor wounds) all at least doubled the likelihood of GTS; the dermatologist-diagnosed skin problems were not related with increased risk. Other factors that increased the odds of GTS were tobacco harvesting and burning or baling, and working in wet clothes. Limited experience in US agriculture (< 2 years) was also a risk factor. Wearing a rain suit while working decreased the odds. When all factors were considered together, the presence of skin rash was the most strongly related to GTS.

Nicotine is both water- and fat-soluble, and long-sleeved shirts and long pants are not protective if they become saturated while working in tobacco. Workers should be advised that wearing a rain suit will reduce their chances of developing GTS, and that they should be especially careful to protect any damaged skin areas. This may include using moisturizers to protect chapped or cracked skin surfaces. GTS-prone workers may want to consider taking a change of clothing to the field if possible. Since tobacco work has a fairly high percentage of new workers each year, outreach staff and more experienced workers could be trained to teach new workers about skin protection and GTS-prevention measures.

Eye on Farmworker Health: Current Developments in Research and Policy is an electronic newsletter covering important recent developments in research and regulation on issues affecting the health and safety of migrant farmworkers. It is a joint project of Farmworker Justice and Migrant Clinicians Network, supported by the Health Resources and Services Administration's Bureau of Primary Health Care. Each issue includes summaries of recent articles and reports, as well as advice on using this information to help health professionals, outreach workers, *promotores de salud*, and advocates strengthen their efforts on behalf of farmworkers and their families.

The contents of this publication are solely the responsibility of Farmworker Justice and Migrant Clinicians Network and do not necessarily reflect the official views of the Bureau of Primary Health Care or the Health Resources and Services Administration.

Please send comments, questions or suggestions for topics you would like to see covered to Pamela Rao, editor, at prao@farmworkerjustice.org, or call 202-293-5420, ext 310.

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