

Working for a safer environment

A single principle guides all DPR policies and programs – to better protect people and their environment. Our work spans a broad range of regulatory activity and programmatic initiatives, including improving enforcement of pesticide laws, reaching out to workers and environmental justice communities, sampling fresh produce and using the best science to assess pesticide risk.

Reaching out to better protect Hispanic workers

WORKER SAFETY CALLING CARD

In 2006, DPR began distributing wallet-sized cards to help field workers understand technical rules for using gloves and respirators. It proved to be a simple yet effective safety tool. When DPR staff recently held a brainstorming session on worker outreach, someone remembered the card and asked, “What if we did another wallet card to tell workers what to do if pesticides make them sick? That they can get medical care, and that all illnesses should be reported to the County Agricultural Commissioner?” So in 2009, DPR will produce a laminated card for workers that lists emergency phone numbers, plus who to call if a pesticide illness occurs.

► *Martha Sánchez of DPR’s Worker Safety Branch and Jose Bueno of our Enforcement staff discuss safe pesticide use at the 5th Annual-Campesinos Saludables (Healthy Farm Workers) event in Tulare County.*

As pesticide regulators, we’ve always followed a simple rule of thumb: If you protect workers well, many other problems can be avoided. Our view is that when risk is reduced for people who are closest to pesticide use, there are benefits for everyone and for our environment. The key is to reach workers, especially those who speak limited English. DPR has long published safety information for field workers in English and Spanish. But limited resources hampered further efforts to reach Hispanic workers and communities.

In 2008, DPR’s Worker Health and Safety Branch assigned Martha Sanchez, an 18-year DPR employee, as an informal liaison to the Latino community. The bilingual Sanchez developed a network of contacts with community activists, health and welfare organizations, Latino news media and other state agencies that serve Hispanic needs.

Her most surprising discovery? “So many people were unaware that DPR even exists,” she said “They are surprised and then they are quiet...

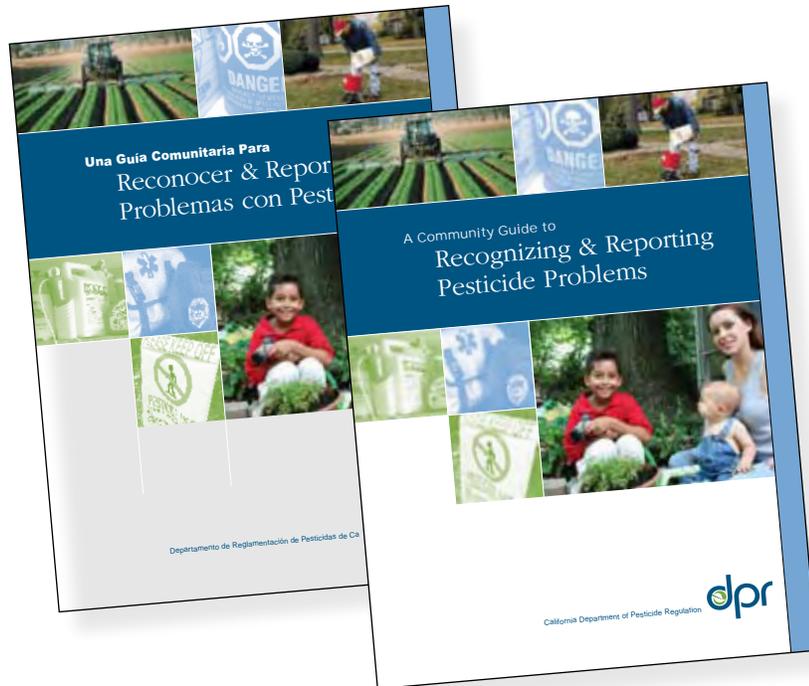


and then their faces light up, because they're glad to learn that someone wants to look out for their well-being." Such breakthroughs often occurred as Sanchez became better acquainted with local community leaders and developed a personal rapport with them.

She also has reached out to worker advocates and encouraged a more positive dialog between activists and County Agricultural Commissioners, who regulate pesticide use locally.

In little more than a year, Sanchez took part in more than 30 community meetings, health conferences and other events to promote pesticide safety for workers and their families. On half a dozen occasions, she visited a health services center in Stanislaus County to help farm worker families learn more about proper pesticide use in the home. She promoted pesticide safety in guest appearances on Radio Bilingue and the Telemundo television network, two major Spanish-language media outlets in the Central Valley.

Sanchez and other DPR staff are also assisting in the Border 2012 project, a state and federal initiative to help Mexican agencies set up and manage pesticide safety programs.



COMMUNITY GUIDE OFFERS INSIGHT, ADVICE

We are always looking for new ways to make pesticide information more readily available – and understandable – to the public. Our 2008 release of the “Community Guide to Recognizing and Reporting Pesticide Problems” represented another major accomplishment in this direction.

The 34-page guide offers plain-language explanations that focus on practical solutions for real-world situations. The guide has already become a popular reference for public health agencies, emergency responders, community advocates, industry, local government officials and individuals with pesticide questions or complaints.

Topics include step-by-step instructions on what to do in a pesticide emergency, a discussion of pesticide drift and odor issues, and a checklist form to use when reporting a pesticide incident. The guide was prepared in consultation with County Agricultural Commissioners, who act as DPR’s local enforcement agents.

The first printing of 5,000 English copies ran out quickly. We printed several thousand more copies early in 2009, including a Spanish-language version targeted for distribution at ethnic venues. The guide already has been distributed to more than 900 community health centers, county health departments and to every public library in the state. California Poison Control Centers are using it for staff training. It also may be downloaded directly from the DPR Web site.

In 2009, we plan two more publications. One will be a Spanish-language home calendar with helpful tips on pest management and pesticide safety at work and in residential settings. Our outreach staff will distribute free copies at fairs and other events and it will also be available by request. The second publication will be a companion to the Community Guide to help people understand and participate in our pesticide decisionmaking processes.



KURT E. FLOREN
Los Angeles County Agricultural Commissioner

Structural enforcement goes undercover in Los Angeles

The 2003 undercover operation in Los Angeles County was a classic. Investigators in unmarked vehicles spent days on stakeouts, then moved in swiftly. It sounds like a TV police show, but these agents worked for the County Agricultural Commissioner's Office. Their investigation targeted structural pest fumigations, and their legwork prompted stronger enforcement that continues today in major urban areas.

More homes are fumigated in Los Angeles than anywhere in California – up to 50,000 a year when real estate business is booming and property sales require termite treatments. Typically, a pest control business covers a home with a large tent, releases a highly toxic gas inside and then “airs out” the structure later, following DPR rules. But the 2003 Los Angeles undercover investigation found only two out of 27 jobs were aerated properly – posing potential danger to fumigation workers, home dwellers and neighbors.

In response, the Los Angeles County Agricultural Commissioner staff stepped up its regulatory oversight with strong support from the industry against “bad actors.” Compliance has risen sharply – particularly in worker safety re-entry rules and aeration of structures, said Agricultural Commissioner Kurt E. Floren. “We do more than 1,200 inspections a year. This includes about 36 undercover surveillances of aeration activities and 10 to 15 for re-entry procedures. We directly witness and document the actions to make the case if violations should occur.”

Funding is key to these labor-intensive investigations. In the 1990s, the Los Angeles Agricultural Commissioner's Office started a pilot enforcement program with a \$5-per-structure fumigation fee. The program's success was underscored on January 1, 2009, when Assembly Bill 2223 gave San Diego County the same fee authority. San Diego now joins Los Angeles, Orange, and Santa Clara counties in the program.

The Los Angeles Agricultural Commissioner adds structural fumigation enforcement to a list of accomplishments in a county that, if it were a state, would rank among the 10 most populous in the nation. Floren began his career there as a pest detection trapper in 1981. He later moved to San Diego, becoming that county's assistant agricultural commissioner, and returned to L.A. for the top job in 2005. While the volume of structural pest control reflects the county's urban character, L.A.'s regulatory profile is anything but simple. “We've had more experience with exotic and invasive pests here in Los Angeles than you would find in most states,” said Floren, noting that Los Angeles is a major shipping point for fresh produce moving across the country and the world. He was on a team of California Agricultural Commissioners who won \$3 million in federal funding for pest detection and exclusion and aided in securing significant future funding through the 2008 federal Farm Bill.



▲ Protecting fumigation workers is a top priority.

Los Angeles has “more experience with invasive pests than you would find in most states.”

Agricultural Commissioner
KURT E. FLOREN



DPR uses the Enforcement Statistical Profile to make enforcement more efficient and effective.

Hard stats helping us improve compliance

DPR's Enforcement Response Initiative, launched in 2005, continues to demonstrate our commitment to consistent, firm and fair enforcement. The initiative led to regulations in 2006 that reinforced enforcement guidelines for the County Agricultural Commissioners, our local enforcement partners. In 2007, the Schwarzenegger Administration supported budget increases that beefed up DPR oversight of CAC programs.

A key commitment was to improve accountability, for CACs and ourselves. In effect, we promised clear, detailed enforcement goals for each county, based on its own pesticide use patterns and other factors. And we committed to a system that would reveal whether local enforcement reached its goals and what DPR had done to ensure success.

The task involves tracking pesticide enforcement programs in 58 differ-

ent counties. Each year, they collectively issue about 39,000 permits for restricted-use materials; do about 11,000 site inspections before restricted pesticides are applied; conduct another 20,000 inspections at agricultural and non-agricultural sites; and do more than 6,600 compliance actions, investigations and enforcement actions.

In 2008, we launched an online template of enforcement metrics that we call the Enforcement Statistical Profile – or ESP. This comprehensive dataset is unique in its detail and public transparency.

We use ESP to identify trends and program changes, CAC staff training needs, areas for industry outreach and improvements in inspection compliance. ESP also allows for comparisons among similar counties and regions. The results are posted online graphically and numerically to provide a

clear picture of where enforcement resources – time and money – are spent, and why.

DPR will use ESP to make future enforcement funding more efficient and effective, and reflect the needs of individual counties.

Taking the next logical step, DPR also has posted county work plans developed by CACs in cooperation with DPR, as well as our evaluations of county performance based on those plans.

“The best way to show our commitment to protecting people and the environment is to make our programs as transparent as possible,” said Director Mary-Ann Warmerdam. “People who are concerned about pesticide enforcement can now get solid information on regulatory priorities and accomplishments, statewide and in their own communities.”



▶ JAHAN MOTAKAF

Senior Environmental Scientist Pesticide Enforcement Branch

Jahan Motakaf joined DPR 17 years ago as a seasonal employee. His day began at 2 a.m. in a Los Angeles shipping terminal, where he collected fresh produce to test for pesticide residues. It was the beginning of an enforcement career that led him to become a supervisor for the Southern Regional Office in Anaheim, where he directs a staff of nine.

In that role, he regularly juggles multiple tasks involving complaints and complex investigations while serving as a liaison to County Agricultural Commissioners and a mentor to his staff. Yet he can describe his priorities in simple terms: "Every time we prevent a pesticide injury to a worker or a member of the public, it's another step closer to success. Every time we make a case that stops contamination of the environment, we've made a difference in people's lives – both now and in the future. We are entrusted to protect people's health, and we are entrusted to protect our water, soil and air. Surely, nothing is more important than this."

ASSESSING THE HEALTH RISK OF PESTICIDES

The first step in making sure pesticides are used safely is to find out what the limits of safe use are. DPR scientists are among the world's best in evaluating the risk posted by pesticides and in developing ways to ensure those risks are minimized.

Risk assessment plays a critical role in DPR's evaluation of the potential hazards associated with pesticide exposure. Risk assessment is a process designed to answer questions about how toxic a chemical is, what exposure results from its various uses, what is the likelihood that use will cause harm, and how to characterize that risk. Risk assessment is often the driving force behind new regulations and other use controls.

In 2007 and 2008, DPR scientists completed 12 risk characterizations. Close to completion were five others, including methyl iodide, a fumigant not yet registered in California, and chlorpyrifos, an insecticide that was frequently detected in the air monitoring project DPR conducted in 2006 in the Fresno County community of Parlier.

Among the risk assessments completed in 2007 and 2008, four were pesticides already listed as toxic air contaminants (TACs): carbaryl, DDVP, mancozeb and maneb. The completion of a risk assessment is important because it makes it possible for DPR to determine if further restrictions on use are needed, and what they should be. Our scientists also completed assessments on methidathion and endosulfan, listing the former as a TAC early in 2008. DPR will list the latter in early 2009. DPR scientists also finished their assessment of chloropicrin and in 2009 will begin the process of bringing it before the Scientific Review Panel for review as a possible TAC.

In progress are another 12 risk assessments, including the insecticide diazinon, also found frequently in the air samples taken in our Parlier environmental justice project, and methyl parathion and phosphine, both already listed as toxic air contaminants.

The methyl iodide risk assessment is the first in which DPR scientists made extensive use of physiologically based pharmacokinetic (PBPK) computer modeling, which allows more accurate predictions of the level of a chemical in the body. Assessing the risk associated with human exposure to environmental chemicals inevitably relies on many assumptions and estimates. Some of the greatest challenges result from the need to extrapolate from the results of animal studies to likely effects in humans. A key consideration for such extrapolation is how and at what rate a substance is absorbed, distributed, metabolized and eliminated – that is, the pharmacokinetics of the substance—in different species. PBPK models describe the dose or degree of exposure at the level of the target tissue, cell or even within the cell, both for the experimental species and in the human population of interest. It is one of the methods scientists use to improve our ability to estimate the extent of potential toxic effects and make better risk assessments.



DPR has long been a major player in food safety issues. Our fresh produce residue monitoring program made national headlines in 2007 when we detected illegal residues of aldicarb sulfoxide in ginger imported from China.

Monitoring what's on your dinner table

In September 2008, a new law began requiring country-of-origin labels on all fresh produce commercially sold in the United States. California growers strongly supported the national law, since they believe our state's strict pesticide laws encourage more consumer confidence.

Indeed, DPR has long been a major player in food safety issues. Our fresh produce residue monitoring program made national headlines in 2007 when we detected illegal residues of aldicarb sulfoxide in ginger imported from China. DPR findings led the U.S. Food and Drug Administration to issue a national warning and spotlighted the issue of pesticides on produce imports.

DPR monitoring is designed to assure that all fresh produce – foreign or domestic – meet the same high standards. In 2007, almost 99 percent of all samples had no illegal or

excessive residues. But because certain commodities from some countries have sometimes shown a higher proportion of residue problems, we subject them to a higher level of scrutiny. For example, we found a relatively high rate of illegal pesticides on Guatemalan snow peas in 2006 and 2007, and acted to take contaminated lots of produce off the market.

The Guatemalan problem provided an opportunity for a pro-active, long-term solution that could apply to other recurring residue detections. Late in 2008, DPR's Enforcement Branch contacted a federally supported research team, an agency within the United Nations, and a Guatemalan export association. We explained our concerns about snow pea residues, helped identify the originating farms and encouraged Guatemalan officials to work with

their growers on alternatives that could benefit both their environment and economy. We believe such a cooperative approach could serve everyone's best interests – from faraway fieldworkers to California consumers.

This initiative provides another example of why USDA and other government agencies look to DPR for expertise in monitoring fresh produce. In 2007, DPR collected 3,562 samples of more than 100 commodities, domestic and foreign, and tested them for more than 200 pesticides. DPR detected slightly more than 1 percent of produce with illegal residues, though the detections did not necessarily indicate a health risk. That's because we detect residues at extremely low levels and move quickly to remove products from the market whenever necessary.



ILLNESS DATABASE GOES ONLINE

For nearly 40 years, our Pesticide Illness Surveillance Program – the first in the nation – has continued to break new ground in reporting, investigating and assessing injuries from pesticide use. In 2009, DPR takes that to another level with an online database that makes thousands of illness reports available to the public. It will allow users to analyze the data with individual, user-defined queries from any computer with access to the Internet. We call it the California Pesticide Illness Query – CalPIQ.

DPR's Worker Health and Safety Branch annually summarizes suspected and confirmed reports of pesticide illness. The yearly summaries have included static tables that break down illness and injury data associated with pesticide exposure. While portions of the data are subject to medical patient privacy laws, most of the information can be released to the public.

University researchers, pesticide industry officials, environmental advocates and others rely on DPR's data in their work. In the past decade, we have responded to more than a thousand of their requests for specific data. We wanted to make this information more accessible and more useful. So DPR's technical staff teamed up with our epidemiologists to develop CalPIQ.

CalPIQ will initially allow online queries of illness reports collected between 1992 and 2006. The program, which will be operational early in 2009, will allow users to select which cases to list or summarize based on variables such as year, agricultural or non-agricultural use, county, pesticide (active ingredient or intended use), type of exposure (such as drift or residue), and more. CalPIQ will be prominently featured on the DPR homepage at www.cdpr.ca.gov.

Computers link DPR to community

In 2006 and 2007, DPR conducted air monitoring at three schools in the Fresno County community of Parlier. The project highlighted our environmental justice initiative, which sought to find out if disadvantaged Californians are disproportionately affected by pesticides. To kick off the project, we sponsored a community fair, inviting more than two dozen local agencies to talk about jobs, education and health. During the project, DPR scientists often visited Parlier schools. While our scientists are trained to be objective and dispassionate in their professional lives, Parlier affected them on a personal level. They found themselves drawn to this poor community, especially to the children.

The project is complete (with our final scientific evaluation due in early 2009), and our connection to Parlier remains. DPR, like many agencies, replaces a portion of its desktop computers each year, usually sending the old computers to a state clearinghouse which in turn gives them to local agencies and charities. In 2008, we decided to take a more direct approach and donated 40 computers to the Parlier school district.

The donation allowed the district to set up a computer lab at Chavez Elementary School. The school, with

about 500 students, "had few computers," said Parlier technology supervisor Avtar Gill. "The computers were old and broke down a lot. It was our school in greatest need."

The computers transformed the school library into a multimedia center, with Internet access and computer training classes. Students and teachers visit in their free time as well. Many students use the lab to pursue interests in science sparked by their contacts with DPR project staff.

Besides the standard software, Gill and his staff installed several learning programs. Especially important is a program that helps students learn to read, write and speak English. The Parlier district is 99 percent Hispanic, and more than 35 percent of the students are migrants. Because Spanish is the primary language spoken at home, many students have difficulty learning and practicing English.

Getting the computers from DPR has made a real difference, Gill said. "It may be a small thing to a state agency, but it is not a small thing to a school district like ours. We don't have a lot of resources, and neither do the families of our students."

ACKNOWLEDGEMENTS:

We would like to thank DPR staff for the wonderful photographs of their work that are featured throughout this publication. We would also like to thank the four staff members who agreed to represent their fellow DPR employees and be spotlighted in this publication.

Editor: Veda Federighi

Any portion of this report may be reproduced for any but profit-making purposes. This report may also be downloaded from DPR's Web site, www.cdpr.ca.gov.

In recognition of the State's budget challenges, we printed the inside pages of this Progress Report on one of DPR's printers rather than having it printed commercially.



ARNOLD SCHWARZENEGGER, Governor

LINDA S. ADAMS
Secretary for Environmental Protection

MARY-ANN WARMERDAM
Director, Department of Pesticide Regulation

DEPARTMENT OF PESTICIDE REGULATION

1001 I Street
P.O. Box 4015
Sacramento, CA 95812
www.cdpr.ca.gov

General Information
916/445-4300

Administrative Services Division
916/445-4140

Enforcement Branch
916/324-4100

Environmental Monitoring Branch
916/324-4039

Information Technology Branch
916/445-4110

Pest Management and Licensing Branch
916/445-3914

Medical Toxicology Branch
916/445-4233

Product Compliance Branch
916/445-4159

Pesticide Registration Branch
916/445-4400

Worker Health and Safety Branch
916/445-4222

ENFORCEMENT REGIONAL OFFICES

Northern Regional Office (Sacramento)
916/324-4100

Central Regional Office (Fresno)
559/243-8111

Southern Regional Office (Anaheim)
714/279-7690

February 2009