As the largest producer of agricultural products in this country, California applies enormous amounts of pesticides to its farmland. But pesticides can cause acute poisoning, cancer, birth defects and damage to the nervous system if they come in contact with people.

The state wants to know how often that’s happening. Before 2001, health officials could track acute pesticide illness in workers, but actual data on the amount of pesticides causing harm in humans was not known. Now, with the passage of the 2001 California Environmental Health Surveillance System Act and the 2003 Health Tracking Act, the state’s Environmental Protection Agency and Department of Health Services are reviewing exposure and tracking data to determine levels of toxic chemicals in people. Californians now have reliable information on pesticide use and the potential exposure from it. Beyond knowing how much is being applied to agriculture, the state knows how much of a pesticide is actually being ingested by people, and if it’s causing them any harm.

“These laws help California find ways to reduce the growing burden of chronic diseases such as asthma, developmental disorders, some forms of cancer and Parkinson’s disease,” says Dr. Amy D. Kyle, of the School of Public Health at the University of California Berkeley.

Such information helps both public health and agricultural interests. Although the agricultural community has been resistant to laws that monitor pesticides and their impact on environmental health, Washington Representative Zach Hudgins says the information can actually help farmers who need to be aware of their own exposure to the chemicals. “Educating the farming community by explaining the harm pesticides can cause is beneficial,” he says. Farmers may fear that providing data on pesticide use will scare consumers, but they need to know for their own health.

Chronic diseases—such as heart disease, cancer and diabetes—are the leading causes of death and disability in the United States, accounting for seven of every 10 deaths and affecting the quality of life of 90 million Americans. Birth defects, developmental diseases, asthma and neurological disorders can also be caused by the environment. Science is finding new links between the environment and chronic diseases every week.

“Rates of diseases related to the environment are increasing. We need to look at these links more closely to better determine health risks,” says Kyle.

State and local health departments trying to determine whether a community has an environmental health risk, such as a cancer cluster, must have data on the health hazards in the area. According to the National Institute of Medicine, efforts to track diseases related to environmental health are fragmented and uncoordinated. And with the number of health hazards in the environment, the number of tracking programs are inadequate. Seeking to correct this concern, the Centers for Disease Control and Prevention (CDC) have initiated...
the Environmental Public Health Tracking Network to expand on state efforts (such as California’s) and create a national system to track environmental exposures and hazards. The program promotes a standardized system to integrate local, state and national databases of environmental hazards, environmental exposures and health effects.

The hope is that environmental public health tracking will provide lawmakers with accurate information necessary to make informed decisions on state health and environmental policies. It will permit the government to swiftly identify emerging health threats and improve the response time in case of emergencies.

“Breaking the process into simpler, non-scientific terms helps the public understand the relative importance of various environmental hazards,” says Indiana Representative Ryan Dvorak. He introduced HB 1473 which provides for public health tracking. And it gives public health an effective tool to respond to threats, he says.

MINE CONCERNS

Former Montana Representative Gail Gutsche still worries about the health effects from mine tailings and asbestos mining. She introduced the first legislation in the country to track chronic diseases caused by environmental imbalance.

“We were concerned that the water from mine tailings around Butte and asbestos in the air from the Libby vermiculite mine were causing health problems, and found out that no one tracks such things,” she says. Diseases related to the environment were estimated to cost Montanans more than $400 million in 2003. With advice and support from the CDC, the state adopted the Montana Environmental Public Health Tracking program, which looks at diseases in humans and the chance that environmental factors cause them.

For many residents of Libby, the national tracking program came too late. According to the CDC, Libby’s experience represents one of the worst cases of community-wide toxic exposures in U.S. history. The community experienced nearly a fourfold increase in an asbestos-related cancer during the period that Libby was the world’s largest supplier of vermiculite, which contains highly toxic tremolite asbestos. Miners were not only exposed to the toxic asbestos themselves, but brought it home on their clothes, exposing their families as well. The asbestos lingered in the homes of Libby for many years, even after the mine was closed in 1990. The Libby incident shows how important it is to track hazards well before they become disasters.

Montana’s study also looked at links between forest fires and increases in asthma-related hospital visits. It looked at pesticide exposures among farm workers and the number of carbon monoxide poisonings from electric generators. Gutsche says she remains committed to environmental public health tracking. The state is seeking more funds from the CDC to continue the program, she says.

OTHER STATE EFFORTS

Thirteen other states have adopted similar legislation to initiate environmental public health tracking. California has adopted the most comprehensive program, but states as diverse as Arkansas and Nevada also have enacted environmental public health tracking.

The CDC has helped to fund state efforts to develop environmental public health tracking programs with $121 million between 2002 and 2006. This funding has allowed states such as Utah to determine whether cancer rates in western Salt Lake City are higher than normal (they are not), and New Mexico to find out if arsenic levels in drinking water is causing bladder cancer (the state found high rates of bladder cancer among white residents, but low among Hispanic and Native American populations who drank from wells.)

The Pennsylvania Department of Health used a CDC grant to set up an asthma surveillance system to clarify the impacts of environmental hazards on school children with asthma. The legislature has followed suit by introducing HB 1223 (2007) to create a comprehensive statewide asthma tracking program and continue this effort once the CDC grant ends.

Minnesota adopted SB 2096 this year, which appropriated $1 million per year for the next three years to establish an environmental public health tracking program within the Department of Health.

“Programs that are already implemented, such as tracking for asthma, lead testing, and mercury, can be coordinated with environmental public health tracking. We’ll get more accurate results while eliminating fat in the budget,” says Representative Dvorak.