

PERFORMANCE AUDIT

**PESTICIDE REGULATION**

DEPARTMENT OF HEALTH SERVICES

Report to the Arizona Legislature

By the Auditor General

November 1990

90-10

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November 30, 1990

Members of the Legislature  
State of Arizona

The Honorable Rose Mofford  
Governor of the State of Arizona

Mr. Ted Williams, Director  
Department of Health Services

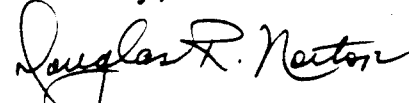
Transmitted herewith is a report of the Auditor General, A Performance Audit of Pesticide Regulation: Department of Health Services. This report is the fifth in a series of five reports on Pesticide regulation and is in response to Chapter 162, Section 7, of the 1989 Session Laws.

The report addresses the Department of Health Services' responsibilities for developing and maintaining a registry of pesticide poisonings. We found that few cases have been reported to DHS, but this appears to be more a function of underreporting rather than a lack of incidences of poisonings. Some minor statutory revisions and greater outreach efforts by DHS could help improve reporting.

Our report also notes that the Department has authority to monitor the presence of pesticides in food, but is not funded to do so.

My staff and I will be pleased to discuss or clarify items in the report.

Sincerely,



Douglas R. Norton  
Auditor General

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## SUMMARY

The Office of the Auditor General has conducted a performance audit of the Arizona Department of Health Services' activities related to agricultural pesticides. This audit was conducted in response to Chapter 162, Section 7, of the 1989 Session Laws, which directed us to review the State's pesticide regulatory program administered by four State agencies, including the Department of Health Services (DHS).

Arizona Revised Statutes give DHS two primary responsibilities related to pesticides. A.R.S. §36-606 directs DHS to develop and implement a system for reporting and preventing pesticide poisoning that must include medical education programs and a Statewide reporting network. DHS' Division of Disease Prevention, Office of Risk Assessment and Investigation is responsible for implementing these statutory requirements. A.R.S. §§36-904 through 36-910 give DHS the statutory authority to embargo food and establish tolerances for pesticide chemicals in food.

DHS has allocated two full-time employees to perform its medical education and reporting duties.

### Significant Underreporting Reduces Usefulness Of Pesticide Registry (see pages 3 through 11)

DHS' Pesticide Registry is of limited value because, at the present time, very few cases of pesticide poisoning are reported. Our research indicates that many cases are not reported to DHS, including such severe cases as a child who was hospitalized after playing in an area containing illegally dumped, granulated pesticides, and a man who lost the use of his hands after exposure to herbicides. Many pesticide poisonings are not reported to DHS because victims do not seek medical care and/or because of the difficulty in making a confirmed diagnosis linking the illness with pesticides.

Although DHS is statutorily mandated to alert healthcare professionals to the symptoms of pesticide poisoning, DHS' efforts to train the medical community have been limited and largely ineffective. Further, because of the difficulties faced by doctors in making confirmed diagnoses, statutory changes allowing potential poisoning cases to be reported may be needed.

**Other Pertinent Information - Food Safety**  
**(see pages 13 through 17)**

There is public concern about the safety of agricultural pesticides. Although DHS has the statutory authority to set tolerance levels for pesticide residues and embargo adulterated food, the Department does not monitor the food supply. Arizona relies on the Federal Food and Drug Administration (FDA) to monitor the levels of pesticides in food; however, the FDA program is limited. The FDA, which tests both foreign and domestically grown produce throughout the country, tested only 445 samples of produce grown in Arizona in 1989. The test results indicated low violation rates. California, Oregon, and Washington supplement FDA programs by testing additional produce in their own state labs.

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## INTRODUCTION AND BACKGROUND

The Office of the Auditor General has conducted a performance audit of the Arizona Department of Health Services' activities related to agricultural pesticides. The audit was conducted in response to Chapter 162, Section 7, of the 1989 Session Laws, which directed us to review the State's pesticide regulatory program administered by four State agencies, including the Department of Health Services (DHS).

Arizona Revised Statutes (A.R.S.) direct DHS to assume two primary responsibilities related to pesticides. A.R.S. §36-606 requires the development and implementation of a system for reporting and preventing pesticide poisoning. The system must include medical education programs and a Statewide reporting network. The Department has assigned responsibility for implementing these statutory requirements to the Division of Disease Prevention, Office of Risk Assessment and Investigation.

In addition, A.R.S. §§36-904 through 36-910 allow DHS to establish tolerances for pesticides in agricultural commodities, and to embargo and seek condemnation of produce containing unsafe pesticides. The Division of Disease Prevention has requested funds for food monitoring programs, but competing priorities have eliminated these programs from the Departmental budget request to the Legislature.

### Staffing And Budget

DHS has assigned two epidemiology specialists to its Pesticide Registry and medical education program. However, recent promotions within the Division of Disease Prevention have left one of these positions vacant. DHS anticipates changing the vacancy's classification to environmental specialist, in order to fill the position with someone who could take samples for laboratory analysis and assume other duties that would enhance the Department's ability to investigate pesticide cases.

Until 1989, DHS received a specific appropriation for its pesticide program. However, in fiscal year 1990, the program budget was absorbed into the Department's lump-sum appropriation.

**TABLE 1**

**DIVISION OF DISEASE PREVENTION  
INVESTIGATIONS SECTION  
Full-Time Equivalent (FTEs)  
and Pesticide-Related Expenditures  
For Fiscal Years 1987-88 Through 1989-90  
(unaudited)**

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|               | <u>1987-88</u> | <u>1988-89</u> | <u>1989-90</u> |
|---------------|----------------|----------------|----------------|
| FTE Positions | 2.0            | 2.0            | 2.0            |
| Expenditures  | \$51,595       | \$61,390       | \$61,500       |

Source: Department of Health Services

**Scope Of Audit**

Our audit focused on the performance of DHS' Investigations Section in maintaining the Pesticide Registry and educating the medical community. We also examined the issue of food monitoring to determine whether the Department should test food for the presence of pesticides. The report presents one detailed Finding on the underreporting of pesticide illnesses. In addition, we developed Other Pertinent Information on monitoring food for pesticide residues.

Our audit was conducted in accordance with generally accepted government auditing standards.

The Auditor General and staff express appreciation to the Director and staff of the Department of Health Services for their cooperation and assistance during the audit.

## FINDING

### SIGNIFICANT UNDERREPORTING REDUCES USEFULNESS OF PESTICIDE REGISTRY

DHS' Pesticide Registry is of limited value because very few cases of pesticide poisonings are reported. Although designed to be an important source of information about pesticide-related illnesses, the registry, due to underreporting, lacks data on many cases. Underreporting appears to occur, at least in part, because DHS has not effectively educated the medical community to recognize and report pesticide poisonings. However, statutory changes may also help to increase reporting.

#### Pesticide Registry Data Important

In 1987, in response to A.R.S. §36-606, the Department of Health Services created a Pesticide Registry to record incidences of pesticide poisoning. Recording data on pesticide poisonings can provide both immediate and long-term benefits. The information contained in the Pesticide Registry can assist researchers studying the chronic or delayed effects of long-term pesticide exposure. Farmworkers and pesticide applicators are routinely exposed to pesticides at varying levels. Pesticides have been implicated in heightened incidences of respiratory ailments, dermatitis, eye problems, cancer, and birth defects among farmworkers. In view of the number of children exposed to agricultural pesticides, research into the long-term effects of pesticides is especially important. In 1984, a Texas study reported that 36 percent of the State's farmworkers were under the age of 16, and many workers brought young children to the fields.

In Arizona and California, registries of pesticide-related illnesses have also provided more immediate benefits. For example, one pesticide product caused a number of reported illnesses shortly after it was introduced in Arizona. In a review of the registry, DHS noticed the problem, identified the product, and worked with other agencies to persuade the manufacturer to improve safety precautions on the product



label. California's registry showed that equipment malfunctions caused many pesticide poisonings. California's registry also showed other farmworker poisonings could be identified or avoided by monitoring farmworker cholinesterase levels to determine the level of exposure to pesticides, or extending the amount of time required before reentering a sprayed field.

### Many Cases Are Not Reported

DHS' Pesticide Registry lists few cases of illness caused by agricultural pesticides. However, our research indicates many cases are not reported to DHS. Given the reasons cases aren't reported to DHS, it is unlikely Arizona will ever achieve 100 percent reporting. However, if the registry is to have any practical value, more effort can and should be made to increase reporting.

Few cases have been reported - Between April 1987 and June 1989, DHS' Pesticide Registry recorded 27 cases or suspected cases of agricultural pesticide poisoning. In addition, 21 illnesses involving agricultural pesticides were brought to the Department's attention, but were classified as "no case."<sup>(1)</sup> In relation to the number of people potentially exposed to agricultural pesticides, the number of cases reported is very small. By the most conservative estimate, Arizona employs at least 11,000 migrant workers each year.<sup>(2)</sup> In addition, an unknown number of people work for pesticide applicators, or live in areas where schools and residences are close to agricultural land.

Although we found no method for accurately identifying the number of unreported cases of pesticide-related illnesses, we did learn of a number of cases that were not reported to DHS. For example, Mexican health officials told a community services worker in San Luis of 35 cases

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(1) DHS categorizes events based on reports from healthcare professionals: if an individual does not seek medical care or if the healthcare provider does not both diagnose and report the illness as either a "case" or a "suspected case", DHS records the event as "no case."

treated by healthcare providers in Mexico, although the poisonings occurred in Arizona. Our review of complaint files at the Commission of Agriculture and Horticulture identified 49 complaints of pesticide-related health effects that did not appear on DHS' Pesticide Registry. In 1988, the Poison Control Center at the University of Arizona received 1,051 calls about pesticide exposures, including calls about structural and horticultural pesticides. Perhaps few of these illnesses could have met DHS' criteria for classification as a "case" or "suspected case." However, they do provide an indication that the extent of pesticide-related illness is greater than the Pesticide Registry shows.

Even when victims of pesticide poisoning sought medical care, their healthcare providers did not always report the illnesses to DHS.

- A child was hospitalized after playing in an area where an illegally dumped bag of granulated pesticide had burst open. DHS learned of the case from a farmworkers' legal aid office, not from the hospital or physician.
- A 36-year-old broccoli worker, and mother of five, visited a doctor for respiratory problems. The doctor sent her to a lung specialist who found severe scarring in her lungs which he attributed to chronic exposure to pesticides. DHS received no report of this case. We discovered it when we interviewed staff at the University of Arizona's Rural Health Office. One of their staff, known for her efforts in assisting farmworkers, had been contacted by hospital staff for help in locating social services for the patient.
- A pressurized hose attached to a pail containing pesticides came loose and drenched a worker. The man was treated at an emergency room and released, but has continued to have health problems. The case was not reported to DHS. A community legal services Outreach worker, who had been asked for help in obtaining Worker's Compensation for the patient, told us about this case.
- Two recent newspaper columns described the problems of a man who can no longer work with his hands as a result of exposure to herbicides while pulling weeds from an irrigation ditch. DHS staff told us they learned of the case by reading about it in the newspaper.
- Another man's feet and legs were badly damaged by a herbicide he was using to clean a ditch. Since he can no longer work, he relies on disability payments from Social Security. DHS had no record of this case. The Community Legal Services Outreach worker who helped this man obtain his disability income, informed us of the case.

Many factors contribute to underreporting - There are probably many reasons why pesticide-related illnesses are not reported to DHS. Two key reasons are that some people may not seek medical care, and those that do may not be diagnosed as having an illness related to pesticides. Even when a diagnosis is made, physicians may be reluctant to report their diagnosis.

Many pesticide-related illnesses do not result in a visit to a healthcare provider. When symptoms are mild or go away by themselves, even people concerned enough to complain to State agencies may not see a doctor. At the Arizona Commission of Agriculture and Horticulture (ACAH), we found eight instances of pesticide-related health complaints in which complainants stated they did not plan to visit a doctor.

In addition, a high-risk group -- farmworkers -- are less likely than the general population to seek medical care. We interviewed physicians, clinic and hospital staff, social and legal service providers, and health officials both in Arizona and other states to learn why. We were told that unless symptoms interfere with their ability to work, farmworkers seldom seek medical care. Most farmworkers have no health insurance, and time away from work means loss of income. In some cases, farmworkers fear that reporting a work-related illness may make trouble for their employer and result in loss of work. (In fact, a farmworker advocate told us of one case in which a farmworker was threatened with loss of work by his employer, if he sought medical care.) When farmworkers do seek medical care, some visit doctors in Mexico because costs are lower and language and cultural barriers are removed.

Even for those who do seek medical care, physicians and clinic staff told us that illnesses related to pesticides may not be diagnosed as such. Our review of medical articles and studies performed in other states confirmed this. Except in severe cases, the symptoms of pesticide-related illnesses are similar to those of a number of common complaints such as flu, gastroenteritis, and allergies. Dermatitis, the most common pesticide-related ailment, has many causes. Tests to confirm diagnosis are often expensive and uncertain, and for some types of pesticides, no lab test exists. Diagnosis may be even more difficult for

healthcare professionals who don't often encounter these cases. Doctors who work regularly with fieldworkers, said milder cases of pesticide-related illness may be misdiagnosed if a healthcare professional is not alert to the possibility, and does not ask enough questions to obtain a thorough occupational history from the patient.

Finally, some physicians and healthcare officials suggest that cases may not be reported because healthcare professionals fear becoming involved in a lawsuit or occupational injury claim in which they might have to defend an uncertain diagnosis in court. Our review of literature on the subject corroborated this statement.

#### DHS Could Provide More Training And Education

DHS' efforts to train the medical community have been limited and largely ineffective. Even with limited resources, DHS could do more.

DHS has provided some training and education - A.R.S. §36-606 requires DHS to provide medical training to alert healthcare professionals to the symptoms, diagnosis, treatment, and reporting of pesticide poisoning. DHS has made some efforts to inform the medical community. In 1987, when the reporting law took effect, DHS distributed information about pesticide poisoning to all physicians, and a number of clinics, doctors' offices, and hospitals in the State. Shortly after the Pesticide Registry was established, DHS also contracted with a toxicologist to present seminars to physicians. These seminars were reportedly very well done; however, attendance was very low. In fact, at the seminar in Tucson, aside from two staff members of the University of Arizona Poison Control Center, only one or two people attended.

More recent efforts by the Department have been somewhat limited. A representative from DHS has spoken about pesticides at events organized by other groups (including a school nursing conference, a medical conference sponsored by the Colegio de Medicina of San Luis, Mexico, and a symposium on migrant health sponsored by Federally funded clinics in Yuma). Department staff also provide, via a toll-free number,

consultation to physicians and advice to the public.<sup>(1)</sup> In addition, DHS continues to provide wall charts on pesticide poisoning, EPA publications in both English and Spanish, and other materials to the health care community. DHS officials state that lack of resources prevents them from doing more.

**DHS can do more** - From our survey of county health departments, clinics, hospitals, other states, and community service groups, we discovered a number of ways in which to educate the medical community and farmworkers.

- Clinic and county health personnel suggested giving brief presentations about pesticides to clinics during medical staff meetings. (Health department staff in Oregon and Washington present short talks on pesticides during hospital "rounds".)
- Some healthcare providers in outlying parts of the State suggested offering seminars in rural areas.
- Community Legal Services staff and other social service providers suggested giving brief talks and distributing basic literature on safety and hygiene to migrant workers at their bus pickup points.

DHS could also include more information about pesticides in its newsletters. DHS publishes a bimonthly bulletin which is sent to health care providers throughout the State. DHS used this bulletin in 1988 to publicize the newly formed Pesticide program and to solicit comments on proposed rules, and in 1989 to alert health care professionals to incidents of pesticide poisoning among pet groomers. With little impact on current resources, DHS could increase its use of this bulletin to promote the reporting of information on the symptoms, diagnosis, and treatment of illnesses caused by pesticides. Oregon's semimonthly Communicable Disease Bulletin presents such information; recent issues contained articles entitled "Monitoring Pesticide Workers for Subacute Organophosphate Effects," and "Pesticide Alert: Poisoning from Flea Control Products Containing Phosmet." In addition, DHS might be able to place information in newsletters and bulletins published by other organizations such as the Arizona Board of Medical Examiners and other

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(1) Although DHS does not maintain records of calls to this number, a DHS official estimates the Department receives six to ten calls per week on the toll-free line. This includes follow-up calls from people who are seeking further assistance or advice regarding pesticide problems previously reported.

medical associations, or funnel information through community services, legal aid, and other public service organizations that offered assistance to us throughout our audit.

Outside money and resources may also be available to supplement DHS' budget. For example, we found training is available and could be brought to Arizona at little or no cost to the State. Using funds from the National Institute for Occupational Safety and Health (NIOSH), a group from a California university developed pesticide seminars for Washington and Hawaii, and has expressed interest in developing a seminar for Arizona. These seminars utilize local experts as much as possible and cover topics such as the basics of toxicology, the health effects as a result of exposure to different types of pesticides, emergency medicine, reporting requirements, nonemergency patients, risk assessment, chronic health effects, and working with farmworkers. As these seminars meet the standards for continuing education credit for healthcare professionals there is an incentive to attend. DHS' assistance in identifying needs and providing referrals to Arizona resources and experts would cost very little or nothing.

Grant money, similar to the NIOSH grant that funded a Texas program to encourage reporting through active surveillance, may also be available to Arizona. Under that program, the state agency telephoned selected healthcare providers on a regular basis to determine whether they had any possible cases of pesticide-related illnesses to report. Florida also obtained a grant from the Agency for Toxic Substance and Disaster Registry to develop a reporting system. A representative of the Environmental Protection Agency told us he had submitted a request for funds to assist states, including Arizona, that had asked for help in addressing underreporting.

#### Statutory Changes May Be Required To Enhance Reporting

Some actions to improve the reporting of illnesses related to pesticides, would require changes in the statutes or regulations. Arizona's present statute on reporting pesticide poisoning may actually discourage some reporting. In addition, at least two states have statutes that impose penalties on physicians who fail to report pesticide-related incidents.

**Wording could be changed** - Arizona's statute requires healthcare professionals to file "...incident reports of pesticide poisoning which they diagnose or reasonably believe, based on their professional judgment, to be pesticide poisoning." As previously discussed, diagnosis, except in severe cases, is often uncertain. Healthcare providers may feel their professional reputation is at risk if they report cases that are not definitely related to pesticides. Arizona relies on physicians to classify each incident as a "case," "suspected case," or "no case." In contrast, California places the burden of categorization on the government investigators who follow up on each reported case.

Changing statutory language to include cases in which the physician is uncertain of the diagnosis, but has a reason to believe pesticides may be involved, could result in a higher rate of reporting. It would also remove the burden of classification from healthcare professionals, who may rarely encounter pesticide-related illnesses. The DHS staff who study pesticide poisonings daily, would then have the responsibility of categorization, perhaps using California's categories of "possible," "unlikely," and "unrelated" to replace Arizona's "no case" where a physician did not diagnose the case as definite or probable.

**Penalties could be imposed** - The Legislature could consider changing the reporting requirement to impose a penalty for nonreporting. DHS officials believe this would have a significant impact on the number of cases reported. In California, healthcare professionals who fail to report pesticide-related incidents are subject to a civil penalty of up to \$250.<sup>(1)</sup> In Utah, failure to report a pesticide poisoning is a misdemeanor, punishable by a fine and/or jail sentence. The actual effect of these laws is unknown, but officials in California and Utah believe the laws have encouraged reporting.

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(1) California also has a unique system that allows any worker to see a physician at no cost for a work-related illness or injury. The physician files a "Doctor's First Report of Work Injury", and is compensated by the insurance company or the state, regardless of whether or not the diagnosis confirms that the illness or injury was actually work-related. Since payment is contingent on reporting, it is considered an incentive to report.

**RECOMMENDATIONS:**

1. DHS should do more to educate the medical community to recognize and report pesticide-related illnesses.
2. The Legislature should consider amending the statute to encourage reporting of cases where pesticides may be involved, but confirming the diagnosis is impossible.



## OTHER PERTINENT INFORMATION

### FOOD SAFETY

During our audit, we compiled information about testing food for the presence of pesticide residue.

#### Public Concerned About Food Safety

Although agricultural pesticides are widely used and contribute to healthy, high-yield produce, there are public concerns about their safety. Pesticides protect our food from insects, weeds, and microbial contamination at a reasonable cost. Additionally, the use of pesticides also ensures the availability of fresh produce year-round. However, there is concern about the potentially harmful effects of pesticides. Chemicals found in certain pesticides present oncogenic (tumor-producing) or carcinogenic (cancer-producing) risks. The Environmental Protection Agency (EPA) has found 53 active ingredients in pesticides to be either oncogenic or potentially oncogenic.

#### DHS Has The Authority To Embargo And Set Tolerances

A.R.S. §36-905 gives DHS the authority to set tolerances for pesticide residues, while A.R.S. §36-910 allows the Director to embargo adulterated food, including food with excessive amounts of pesticide chemicals. In conjunction with the Department's ability to embargo produce, it can also monitor produce. At the present time, DHS works with the Federal Food and Drug Administration (FDA) to embargo food found to contain levels of pesticides unacceptable by FDA standards. However, DHS does not monitor the food supply, nor has the Department established tolerances different from those set by the EPA.

#### FDA Monitors Arizona's Food Supply

Although statutorily authorized to conduct its own program, Arizona, like most other states, relies on the FDA to monitor the levels of pesticides

in food. While the EPA registers pesticides and sets allowable levels of tolerance for them, it is the FDA's responsibility to monitor and enforce those tolerance levels. The FDA tests both domestically-grown and imported produce nationwide, and has found a violation rate of 1.0 to 3.5 percent.<sup>(1)</sup> However, the FDA program is limited in both size and scope.

The FDA estimates that they test less than 1 percent of imported and 2 percent of all domestically grown produce in district labs across the country. Produce grown in Arizona is tested at the FDA laboratory in Los Angeles. Produce imported into Arizona and California from Mexico and produce grown in Southern California is also tested at the FDA-Los Angeles lab.

Sample size is limited - Although Arizona relies on the FDA to protect its food supply, the quantity of food that is actually tested is limited. In 1989, the FDA tested 445 samples of produce grown in Arizona, or less than one percent of the fruit and vegetables grown in the State last year. Samples of Arizona produce are selected according to a sampling plan by the FDA's methodologist in Los Angeles. The plan is designed to encompass a diverse group of crops, based on the mix-by-volume of produce grown and problem crops that tend to have a higher occurrence of violations. Crates of selected produce grown in Arizona were shipped to Los Angeles where the entire quantity of fruits or vegetables was ground and then tested for harmful levels of pesticides. Approximately 40 samples of produce grown in Arizona, California, and Mexico are tested each day in the Los Angeles lab. An FDA representative in Phoenix said that the capacity of the lab in Los Angeles limits the amount of samples that can be tested. In addition, the FDA estimates that it costs approximately \$90 to transport and test each sample.

Imported produce too is tested at a low rate by FDA. Testing produce imported from Mexico is important because pesticides that the EPA has

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(1) When a violation is found, the FDA embargos the shipment. They also then require the grower to demonstrate compliance on his future shipments by having his shipments tested at a private laboratory.

banned in the United States have been found on that produce. Additionally, not all Mexican farmers are aware of EPA tolerance levels for pesticides. In the winter when most produce can be grown only in southern climates, approximately 800 trucks enter Arizona each day carrying Mexican produce. From those trucks, approximately ten samples a day are taken. The FDA estimates that 2 percent of all produce imported into Arizona and California from Mexico is tested annually. Although in 1989 the FDA devoted three-fourths of its pesticide testing resources for testing imported food, nationally, only 10 percent of all produce sold was imported.

Although testing is limited, the results of FDA testing show low violation rates. Violations occur for one of two reasons, either the level of pesticide residue exceeds EPA tolerances, or the pesticide residue, while in the legal range, may be from a chemical that has not been approved by the EPA for use on that particular crop. For example, a pesticide that is approved for lettuce but not for spinach would constitute a violation if it were found on spinach, even at low levels. FDA testing in Los Angeles shows that Mexican produce generally has a violation rate of 3 to 4 percent, while the violation rate for Arizona produce ranges from 3 to 5.7 percent. The FDA says that it cannot monitor all food, nor can it test food for all pesticides in the marketplace.

Problems with FDA testing - The screening method used by the FDA to detect residues on produce samples is limited and, can detect only some of the many pesticides sold. FDA chemists note that they test for chemicals previously found on produce and for harmful pesticides that are of particular concern such as DDT and Aldicarb. The FDA tries to detect the presence of additional pesticides using single- and multi-residue testing methods. However, FDA chemists note that with routine multi-residue testing they still cannot detect all of the pesticides currently being used. At the present time, there is concern about whether the tolerance levels set by the EPA are adequate to protect certain subgroups of the population. Researchers say that low violation rates are meaningless if tolerance levels fail to protect sensitive segments of the population such as children.

Other states' programs - To supplement the testing done by the FDA, several states have instituted food testing programs. Due to concern from legislators and the public, these states have increased the amount of food being tested, and work with the FDA to test the maximum amount of produce possible. California, the leader in food safety, spends twice the amount the Federal government spends each year to monitor produce. Oregon and Washington have implemented less costly testing programs.

- California - California has a \$40 million a year food testing program with seven elements including stricter tolerance regulations than the EPA, and four programs for pesticide residue sampling. In the past three years, California's violation rate has dropped from 2 percent (which it had been for 17 years) to 0.70 percent. Fifteen thousand food samples are tested in California each year. California's branch chief in charge of the Pesticide Regulation Program attributes the drop in violations to the strong county registration programs that strictly monitor pesticide sales and use. In addition, California has an agreement with the FDA that enables the state to coordinate testing and test results.
- Washington - Washington spends \$1.5 million annually on food testing programs, not all of which involves pesticide residue testing. The state has a contract with the FDA to test 150 produce samples annually for them. As a part of the state's own testing program, Washington samples approximately 800 pieces of produce, and has a pesticide violation rate of less than 0.50 percent.
- Oregon - Oregon's Pesticide Residue Testing Program costs the state \$189,000 annually. The program includes an informal work-sharing program with the FDA. Together, they test approximately 1,600 samples of produce annually. Sharing planning and test results essentially doubles their capacity to monitor the state's produce. The program administrator stated that 2 percent of the food tested contains illegal levels of pesticide residue.

#### DHS Has Considered Re-implementing A State Program

From 1981 to 1985, the Department of Health Services operated a limited food monitoring program that was managed by one person who had additional responsibilities. In mid-1985 when the former food testing manager was transferred, DHS chose not to continue the program. The Division of Disease Prevention has recently given food monitoring more attention and has raised the issue during the preparation of its Divisional budget request. The Division notes the need for increased monitoring and surveillance of produce grown in Arizona as well as imported produce.

However, the Division thus far has not developed a proposed budget for food monitoring, and the issue has never been included in DHS' budget request to the Legislature.



# ARIZONA DEPARTMENT OF HEALTH SERVICES

*Office of the Director*

ROSE MOFFORD, GOVERNOR  
TED WILLIAMS, DIRECTOR

November 26, 1990

Mr. Douglas R. Norton  
Auditor General  
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**SUBJECT: COMMENTS ON REVISED PRELIMINARY REPORT DRAFT OF THE  
PERFORMANCE AUDIT OF PESTICIDE REGULATION**

Dear Mr. Norton:

Thank you for allowing me the opportunity to review the revised preliminary report draft of the performance audit of Pesticide Regulation: Department of Health Services. I believe the revised document accurately reflects the comments we made to members of your staff during our meeting on November 16, 1990.

The Arizona Department of Health Services (ADHS) is committed to pesticide regulation. My staff has been directed to consider all the recommendations listed in the report, and to implement those that are cost effective and which are likely to result in improved reporting of pesticide related illnesses. To demonstrate our commitment, ADHS staff will immediately seek to revise the Memorandum of Understanding now in place with the Commission of Agriculture and Horticulture to assure that all citizens who believe they have been made ill from pesticides are contacted by ADHS staff.

ADHS staff will continue to participate in efforts to educate medical professionals regarding the recognition and management of pesticide poisonings, as well as the duty to report those illnesses to the Department. I am convinced the pesticide poisoning reporting registry can be improved, and have conveyed that conviction to staff.

We agree that revision of A.R.S. 36-606 to place on ADHS staff the responsibility of determining whether an undiagnosed illness or complaint of illness is associated with exposure to pesticides may benefit surveillance and reporting. However, this may require substantial additional resources for the pesticide registry.

I would like to take this opportunity to commend your staff on a job well done. We appreciate their professional and cooperative attitude.

Sincerely,

Ted Williams  
Director

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