

GAO

Testimony

Before the Subcommittee on Department Operations, Research,
and Foreign Agriculture, Committee on Agriculture, House of
Representatives

For Release on Delivery
Expected at
9:30 a.m. EST
Wednesday
March 11, 1992

FOOD SAFETY

USDA's Data Program
Not Supporting Critical
Pesticide Decisions

Statement of JayEtta Z. Hecker, Director
Resources, Community, and Economic Development
Information Systems
Information Management and Technology Division



Mr. Chairman and Members of the Subcommittee:

We are pleased to be here this morning to discuss food safety work we have recently completed for Chairman Wise of the House Government Operations Subcommittee on Government Information, Justice, and Agriculture. In 1991, the U.S. Department of Agriculture (USDA) implemented a program to collect improved pesticide data. A cornerstone of this program is the identification and coordination of data needs and responsibilities with the two other principal federal food safety agencies, the Environmental Protection Agency (EPA) and the Food and Drug Administration (FDA).

Because of concerns about how agencies coordinate the collection of reliable pesticide data, Chairman Wise asked us to review USDA's Pesticide Data Program to determine (1) whether it is producing the data needed for making improved pesticide regulatory decisions and (2) whether USDA has a strategy for managing the data resulting from the program. The key objective of the program is to collect comprehensive, statistically valid, and scientifically based pesticide usage and residue data that can be used to improve government decisions on pesticide safety within USDA, EPA, and FDA. It is this interagency aspect of the program that makes it unique in addressing pesticide data problems. We reported the results of our review in January 1992.¹

Our work has led us to conclude that while portions of USDA's program are working relatively well, serious weaknesses exist that are preventing the program from effectively supporting critical pesticide decisions. USDA has made progress in collecting pesticide usage data useful to itself, EPA, and FDA.

¹Food Safety: USDA Data Program Not Supporting Critical Pesticide Decisions (GAO/IMTEC-92-11, Jan. 31, 1992).

However, we identified problems with USDA's residue data collection--problems that deserve the Department's attention and further explanation to the Congress. Moreover, these problems are magnified by the absence of a departmentwide information resources management strategy, which is critical to the successful collection, processing, and dissemination of pesticide data across traditional organizational boundaries in the federal government.

Before I discuss these points, including our recommendations to USDA and recent steps the Department has taken in response to our report, I would like to briefly give you some background on pesticide data issues confronting the federal food safety agencies. These issues help give some perspective to the role of USDA's data program and to matters discussed in our report.

Better Data Needed to Support Estimates of Pesticide Risks and Benefits

In recent testimony before this subcommittee, we reported that persistent problems exist in collecting and managing the data needed to develop more precise estimates of pesticide risks and benefits.² In general, federal food safety agencies lack a coordinated strategy for systematically identifying, collecting, and managing key data needed to reduce uncertainties in pesticide risk and benefit assessments. The absence of such a strategy creates uncertainty about whether scarce federal resources are being used efficiently to avoid potential duplication of efforts, resolve unmet data needs, and improve upon data collection and management techniques.

Our reviews of EPA's pesticide benefit and risk assessments have clearly documented the effect of data limitations on the

²Food Safety: Difficulties in Assessing Pesticide Risks and Benefits (GAO/T-RCED-92-33, Feb. 26, 1992).

usefulness of these assessments. Critical data needed for these assessments are in many cases of poor quality or missing altogether. Addressing these data gaps and reliability problems lies at the heart of USDA's Pesticide Data Program. Comprehensive, high-quality data on pesticide usage and pesticide residues are often unavailable due to the high costs of collecting such data. As such, it is critical that the decisions being made on the types and quantity of pesticide data to be collected and the resources required to generate such data be made prudently and effectively.

More specifically, although EPA requires pesticide usage data in constructing benefit estimates, it often lacks reliable data on the quantity and types of pesticides applied on food crops. In the absence of reliable data, EPA pieces together information in a somewhat disjointed, case-by-case basis from a variety of sources. Using these data has been problematic for EPA, however, because the data are not collected uniformly; are not statistically reliable; and are often not available for many minor-use crops, such as fruits and vegetables.

Similarly, EPA's risk assessment process requires data on the amount of pesticide residues remaining on a food commodity after it has been harvested. Together with food intake data generated from USDA's Food Consumption Surveys, EPA weighs the human health risk by assuming that consumers are exposed to the maximum legal tolerance level allowed. If this process yields an acceptable level of risk, EPA concludes that the public health is protected by existing tolerances. If EPA decides an unacceptable level of risk exists, it revises its exposure estimates using more realistic estimates of the residues that consumers are likely to encounter. As with the usage data, the lack of data availability and adequacy forces EPA to use scientific judgment on which data to use most heavily.

USDA's Program Introduced to Improve Data
Supporting Pesticide Regulatory Decisions

EPA has a clear need for better usage and residue data to improve its risk and benefit assessment determinations. USDA's Pesticide Data Program, launched under the umbrella of the President's 1989 Food Safety Plan, was initiated to assist in resolving longstanding data limitations by collecting comprehensive, statistically valid, and scientifically based pesticide usage and residue data. The program is comprised of two separate data collection activities conducted by two different USDA agencies.

In fiscal year 1991, USDA's National Agricultural Statistical Service began surveying farmers in four states--Arizona, Florida, Michigan, and Texas--to collect pesticide usage data such as type of pesticide used, target crop, acres treated, and application rates.³ The survey results attempt to measure statewide usage levels; however, data reliability varies for the reported pesticides. In fiscal year 1992, this effort was expanded to collect data on fruit and nut crops in eight additional states.

Concurrently, USDA's Agricultural Marketing Service began to implement a pesticide residue collection effort for selected fresh fruits and vegetables from food distribution centers in six states--California, Florida, Michigan, New York, Texas, and Washington. Sample collection and laboratory analyses are being conducted by state government laboratories funded through cooperative agreements signed between USDA and the participating states. USDA originally intended to start providing residue data to EPA and FDA on 22 food commodities and 16 pesticides in July 1991.

³The National Agricultural Statistical Service also published pesticide usage data collected separately by the state of California.

For fiscal years 1991 and 1992, USDA's total spending for this program is expected to be \$33 million, with over 70 percent of the funding--approximately \$24 million--being spent on the residue data collection. According to recently released budget information, USDA expects to devote approximately \$21 million more in fiscal year 1993 for Pesticide Data Program activities.

Absence of Agreements and Unanticipated
Program Complexities Threaten USDA's Progress

USDA's ongoing pesticide usage surveys are proceeding on schedule, and our discussions with EPA and FDA officials indicate general satisfaction with initial data published by the National Agricultural Statistical Service in June 1991. USDA's pesticide residue data collection, however, has encountered problems that have resulted in a reduction in program scope, assembly of partial data sets that are behind schedule, and the use of sampling plans that preclude statistically reliable results.

We believe that three problems pose significant risks to the success of its Pesticide Data Program. First, although coordination meetings have occurred regularly, USDA implemented this program without written agreements with EPA and FDA on specific program direction, including specific pesticide data needs. For example, the arrangements between USDA and EPA on specific commodity and pesticide pairings to be tested--and the rationale for the choices made--are not supported by documentation or evidence of review and approval by senior agency officials. The absence of clear agreement with EPA on pesticide usage and residue needs associated with its registration and reregistration programs jeopardizes accountability for the program's intended objectives.

USDA expected to collect data on as many as 22 commodities and 16 pesticides; however, as of January 1992, only partial data

existed for 7 commodities being specifically analyzed for 11 pesticide residues. In correspondence to us, the head of EPA's Office of Pesticide Programs stated that the agency did not have immediate plans to use USDA's initial residue data.

Second, although it is collecting pesticide residue data in five states, USDA has yet to develop a statistically defensible sampling plan capable of producing the quality of data envisioned at the program's outset. Moreover, USDA is unable to say when it will collect statistically valid residue data. Instead, the Department has indicated that such validity is a program goal whose feasibility has not been fully determined--even though statistical reliability was one of the major distinctions separating USDA's efforts from monitoring activities conducted by FDA and other organizations. To our knowledge, USDA has not determined the costs of conducting its residue program with statistically valid sampling techniques that would allow inferences about its residue findings to be made at state or national levels. By compromising on statistical validity, USDA has jeopardized a fundamental benefit of its program.

Third, the Pesticide Data Program was initiated without determining whether available computer resources could process and disseminate the collected pesticide data in the most effective and efficient manner to meet users' needs within USDA, EPA, and FDA. Although it was assumed that new database systems would be used for both the pesticide and residue data, needs assessments were not conducted to determine the adequacy of existing systems or the functional requirements of new ones. Eventually, thousands of residue data records will be collected annually from laboratories in participating states. USDA admits that information management issues were set aside as programmatic matters between EPA and FDA--such as sampling and laboratory procedures--were discussed. Although USDA has made progress in addressing this issue, system requirements still remain largely

undefined.

Remedial Actions and USDA's Response

In our report, we make several recommendations to help establish a better foundation for the success of USDA's Pesticide Data Program. After completing the current data collection effort, we have recommended that the Secretary of Agriculture not proceed with further residue data collection activities until the Administrator of the Agricultural Marketing Service (1) evaluates, in conjunction with EPA and FDA officials, the results of the current data collection activities; (2) reaches agreement with EPA and FDA on how the Pesticide Data Program can most efficiently provide statistically reliable data, meet users' needs, and support interagency pesticide responsibilities; and (3) documents these agreements with EPA and FDA.

In addition, Mr. Chairman, we have recommended that the Secretary of Agriculture direct the Department's Office of Information Resources Management--working with the involved USDA agencies--to develop and implement an information technology strategy, plan, and implementation schedule that details how the Department will manage, process, and disseminate all pesticide data being compiled under the Pesticide Data Program.

As is evident from USDA's written comments on our report, the Administrator for AMS did not agree with the conclusions made in our report. We responded to his comments in a separate section in our report and saw no reason to change our conclusions or recommendations. I will address the major points of contention.

First, USDA states that it reached agreement with EPA on its data needs and that these are being satisfied with ongoing data collection activities. While coordination meetings have occurred regularly among working groups from the three agencies, no

written agreements exist. According to USDA, an interagency Memorandum of Understanding is about to be signed covering coordination issues between itself, EPA, and FDA. This is a positive and long overdue step. However, we believe this agreement must outline explicit steps of action to address the concerns raised in our report, such as defining explicit data needs and responsibilities and avoiding duplication with similar ongoing and planned FDA and state monitoring activities.

Second, USDA states its Pesticide Data Program was in early stages during most of our review and that data needs and specific program implementation steps were evolving. However, in reviewing USDA's program planning documents and fiscal year 1991 budget justifications, USDA characterized its Pesticide Data Program differently. In 1990, USDA documents cited specific numbers of commodities and pesticides to be tested for residues and noted that results would be statistically valid data at a national level. Also, data reporting schedules were established and modified in late 1990 and early 1991. Thus, while modifications are to be expected in any program implementation plan, the significant changes made in AMS' residue collection effort--such as reducing commodity and pesticide coverage, forgoing statistically defensible data results, and delaying data reports--are symptomatic of larger, underlying problems that need attention.

Third, USDA agreed that most of its efforts during the first year have been focused on ensuring that data collection efforts were initiated. In the concluding stages of our review, USDA has taken steps to ensure that data collected under its program are being effectively managed with automated systems. These steps are outlined in our report. USDA believes that program requirements can be satisfied with existing computer resources. Our concern is that with system requirements and interagency users' needs still largely undefined at this point, the data

collection and reporting requirements may be subjected to changes that could jeopardize the value of the data now being collected.

In summary, Mr. Chairman, we believe that USDA's Pesticide Data Program requires critical interagency evaluation and input. If the program's central objective is to support interagency pesticide data needs, it is essential that an interagency strategy guide the program. Otherwise, USDA may be jeopardizing a significant investment of federal resources intended to improve risk and benefit assessments used for pesticide regulation. The effort requires that data needs be clearly defined; agreements on data collection, management, and dissemination be well established; and the costs and expected benefits associated with these efforts be articulated by the involved agencies and communicated to the Congress.

Mr. Chairman, that concludes my statement. I will be happy to answer any questions that you or members of the Subcommittee have about our work.

Ordering Information

The first copy of each GAO report and testimony is free. Additional copies are \$2 each. Orders should be sent to the following address, accompanied by a check or money order made out to the Superintendent of Documents, when necessary. Orders for 100 or more copies to be mailed to a single address are discounted 25 percent.

**U.S. General Accounting Office
P.O. Box 6015
Gaithersburg, MD 20877**

Orders may also be placed by calling (202) 275-6241.

**United States
General Accounting Office
Washington, D.C. 20548**

**Official Business
Penalty for Private Use \$300**

**First-Class Mail
Postage & Fees Paid
GAO
Permit No. G100**