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PESTICIDES

USDA's Pesticides Residue Research Project

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Mr. Chairman and Members of the Subcommittee:

We are pleased to be here today, with Chairman de la Garza's permission, to discuss our ongoing work on the U.S. Department of Agriculture's (USDA) role in the registration of pesticides for use on minor crops. Minor crops include vegetables, fruits, nuts, and ornamentals. The findings discussed today are tentative and subject to change. Our work is expected to be completed this Spring.

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, requires the Environmental Protection Agency (EPA) to reassess and approve, by 1997, pesticides registered before November 1984. In order to do this, chemical firms must provide health and environmental effects data to EPA for these pesticides. USDA's Interregional Research Project No.4 (IR-4) supports this registration process by completing research on pesticides that are used on minor crops.

Our testimony today provides a snapshot of (1) the status of IR-4's research to support the pesticide registration process for minor crops, (2) how IR-4 currently uses its resources, and (3) our observations on USDA's responsiveness to the availability of pesticides for use on minor crops. In summary, our findings to date are as follows:

-- IR-4 will not complete, by the 1997 FIFRA deadline, the research necessary to support the registration of many high-priority pesticides for use on minor crops. This is primarily due to past and present funding limitations. Furthermore, since EPA and industry are also involved in the registration process, increasing IR-4 funding alone will not ensure that pesticides are available for all minor crops. Industry must still provide various health and environmental effects data and EPA must analyze and approve these data.

-- IR-4 officials believe that the IR-4 research grant project makes effective use of its limited resources at the project level to gather the pesticide residue data that EPA needs to register pesticides for use on minor crops. This is because IR-4 uses the existing land grant university infrastructure, targets its research agenda to include those pesticide uses most likely to be approved by EPA, and annually reviews its research priorities.

-- USDA headquarters has been slow to respond to the need for pesticides on minor crops, even though IR-4 officials at the regional level developed a strategic plan in 1989 to address this need.

BACKGROUND

Before discussing our findings on IR-4, we believe that it would be useful to place this program within the context of overall pesticide requirements and other pesticide activities managed by USDA. FIFRA authorizes EPA to register pesticides for specific uses and to take regulatory actions, such as denying, canceling, or restricting a pesticide's use, if the pesticide presents an unreasonable risk to human health or the environment. Amendments to FIFRA enacted in 1988 required that all pesticide uses registered before November 1984 be reregistered with EPA by 1997 to meet current health and environmental standards. These reregistrations must be based on new research data and analysis.

USDA is involved in the FIFRA process as well as other related efforts which are reflected in its 12 pesticide programs or activities. These efforts are carried out primarily under the direction of two Assistant Secretaries, the Secretary for Marketing and Inspection Services and the Secretary for Science and Education. In addition, the Assistant Secretaries for Economics and for Natural Resources and Environment and the Under Secretary for International Affairs and Commodity Programs are involved. These 12 programs and activities include, among other things, (1) pesticide residue collection, analysis, and monitoring, (2) research on alternative pesticide controls or pesticide uses, and (3) regulation and record-keeping of pesticide activities. (See attachment 1 for an overview of the objectives of these pesticide programs and their respective funding levels).

IR-4 was organized in 1963 by the State Directors of the Agricultural Experiment Stations as a special research grant to obtain data to support minor crop pesticide registrations at EPA. To do this, IR-4 gathers and procures research data from industry, federal agencies, and state universities and colleges to support registrations and reregistrations through EPA for pesticides that will be used on minor crops. IR-4 usually becomes involved when a chemical firm notifies EPA that it intends to stop making a pesticide available for a particular use on a minor crop. In addition, individual farmers or crop organizations will request IR-4 to research certain pesticide uses. These requests are then prioritized by IR-4 agricultural research specialists to establish a listing of high-priority research needs. In 1982 the IR-4 research effort was expanded to include the use of chemicals on animals and biological pest controls.

The availability of pesticides for minor crops is important because of the economic significance of minor crops. The economic value of an individual pesticide use on a minor crop is difficult to determine, but the economic value of minor crops, in the aggregate, is significant. USDA's 1990 data on U.S. sales from minor crops totaled about $30 billion--or about 40 percent--of the estimated $70 billion derived from sales of food and feed crops.

If pesticides are not available for the production of these minor crops, producers, consumers, and the environment may be adversely affected. Growers could lose income through reductions in crop volume and quality and consumers could see higher prices, lower quality, and less variety. Furthermore, some agricultural experts have suggested that the loss of pesticides for use on minor crops could impede the development of environmentally sound agricultural technologies, such as Integrated Pest Management, which depends on a mix of pesticides--including those for minor crops--and alternative pest management techniques.

IR-4 WILL NOT COMPLETE ALL RESEARCH FOR PESTICIDES THAT ARE USED ON MINOR CROPS BY THE 1997 DEADLINE AT CURRENT FUNDING LEVELS

Since 1963, IR-4 has supported registrations or reregistrations of over 3,600 pesticide uses for minor crops. Yet despite this success, a backlog of over 5,000 requests currently exists for pesticide uses on minor crops. Of this number, IR-4 officials have identified about 1,000 uses as high-priority for research because IR-4 officials believe they could have the greatest potential impact on the agricultural industry if the pesticide use is unavailable for minor crops. In addition, IR-4 officials estimate that about 300 uses will be added to this group of 1,000 each year. At the current project completion rate, not all of 1,000 high-priority pesticide uses for minor crops and the 300 additions each year will be registered or reregistered by the 1997 deadline.

In 1989, in response to the FIFRA amendments and the growing reregistration backlog, IR-4 developed a strategic plan to address this problem. According to this plan, about $12 million was needed annually to research new registrations and complete the reregistration of the 1,000 high-priority pesticide uses for minor crops by the FIFRA deadline. Under this plan about 500 projects would have been completed each year between 1989 and 1997. However, IR-4's past and current funding has not kept pace with the plan's $12 million estimate. Actual funding has averaged about $4.2 million a year since 1989.

IR-4 officials estimated in 1992, that in order to meet the FIFRA deadline about 560 of the high-priority projects would need to be completed annually. In order to complete 560 projects per year, and make up for the funding shortfalls in years 1989 through 1992, funding would have to be increased to about $14 million annually. Nonetheless, USDA has requested about $9.6 million for IR-4 in fiscal year 1993, and expects to complete about 300 research projects at this funding level.

At the $9.6 million funding level and the 300 project completion rate, some pesticides will not be registered or reregistered by 1997. USDA told us that they could not accurately

determine which crops would be affected or what the economic effects would be of losing these uses.

Completing reregistration of pesticide uses for minor crops by the 1997 deadline is also doubtful because EPA's resources are limited and industry is reluctant to provide certain data. EPA officials told us, that they would need more staff with scientific expertise to clear the increased number of pesticide uses for minor crops that they would receive from IR-4 if IR-4 funding were increased. Furthermore, in some cases, chemical firms may be reluctant to provide IR-4 with certain health and environmental effects data to register or reregister pesticide uses for minor crops. This could occur, in some cases, because if an additional use is approved, the pesticide tolerance for human consumption of that pesticide could be exceeded.

IR-4 OFFICIALS BELIEVE THEY MAKE EFFECTIVE USE OF PROJECT RESOURCES

For at least three reasons, IR-4 officials believe that they make effective use of their limited resources. First, the IR-4 project uses the existing state university and college agricultural research infrastructure (i.e., the personnel, buildings, equipment, and land) to do crop testing and data analysis. IR-4 officials estimate that the IR-4 research project can develop the residue data for a single pesticide use on a minor crop for about $20,000. In contrast, an agrichemical industry trade association official estimated, that the same data could cost a chemical firm about $100,000 to $150,000 to develop.

Secondly, IR-4 coordinates experiments with university researchers, USDA's Agricultural Research Service (ARS), chemical firms, and EPA, both before and after research is conducted in the field, to ensure that only the pesticide uses that are likely to be registered at EPA are researched. In this way, IR-4 officials believe that they target the project's limited resources for the pesticide uses on minor crops that appear to have a high likelihood of being approved. Furthermore, IR-4 develops protocols for each research project consistent with EPA's standards for research and monitors these projects to ensure compliance with the standards.

Finally, IR-4 officials told us that they developed both a long-term strategic plan and annual work plans to manage pesticide research for minor crops. Agricultural specialists associated with IR-4, at the regional and national level, annually review and set priorities for researching these pesticide uses that remain to be reregistered and requests for new registrations.

USDA HEADQUARTERS HAS BEEN SLOW TO RESPOND TO THE NEED FOR PESTICIDES ON MINOR CROPS

Although the agricultural community has been concerned about the availability of pesticides for use on minor crops since the passage of the FIFRA amendments, USDA headquarters has only recently begun to address this concern. As a result of the 1988 FIFRA amendments, IR-4 officials at the regional level developed a strategic plan in 1989 to address this growing concern, but USDA headquarters did not use that plan to ask for sufficient funding to complete the residue collection for the 1,000 high-priority pesticide uses for minor crops. The Assistant Secretary for Science and Education told us that although pesticide reregistration for minor crop uses is a significant issue, USDA is involved in several other pesticide efforts. He said that in light of these other program efforts, IR-4 funding must be balanced against other USDA pesticide priorities. Hence, USDA continued to operate the IR-4 research project as it had for many years, completing about 100 minor-use residue projects per year. Thus, the number of pesticide uses for minor crops that remains to be registered or reregistered continues to grow.

In addition, USDA has not studied the potential effects of incomplete pesticide registrations by 1997, including the effects on producers, consumers, and the environment. According to officials at USDA's Economic Research Service, detailed and reliable economic data and/or studies are not available from the Department to determine which of the high-priority pesticide uses should be supported first. These officials told us that pesticide data for minor crops are not available because the Department's priority has been on studying the major crops.

Without economic data, USDA must rely on agricultural specialists to use their best judgment to rank IR-4's high-priority pesticide research and justify requests for funding the most critical projects. We have issued several reports on the need for improved risk-benefit assessments and additional economic data in order for USDA and EPA to make informed decisions.[1] Our testimony before this Subcommittee on February 26, 1992, similarly discussed some of these data limitations.

As part of USDA's response to the availability of pesticides for minor crops, as well as broader pesticide issues, the Secretary

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[1]Pesticides: Economic Research Service's Analyses of Proposed EPA Actions (GAO/RCED-89-75BR, Mar. 14, 1989). Pesticides: EPA's Use of Benefit Assessments in Regulating Pesticides (GAO/RCED-91-52, Mar. 7, 1991). Pesticides: Better Data Can Improve the Usefulness of EPA's Benefit Assessments (GAO/RCED-92-32, Dec. 31, 1991).

of Agriculture in 1991 designated the Administrator, Agricultural Marketing Services, as the Department's spokesperson for pesticides. The spokesperson also chairs an informal working group that includes representatives of USDA, EPA, IR-4, and industry. Among other things, this working group provides early warning to farmers of a chemical firm's decision not to reregister a pesticide for a particular use on a minor crop. While this coordination represents a step in the right direction to address the availability of pesticides for minor crops and other pesticide problems, neither the spokesperson nor the ad hoc working group on pesticides has the management authority to change IR-4 efforts or pesticide policy.

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In summary, Mr. Chairman, based on our work to date, IR-4 will not complete all necessary residue research for pesticide use on minor crops by the FIFRA deadline. Furthermore, while IR-4 officials believe they make effective use of their project resources, USDA headquarters has been slow to respond to the need for pesticides on minor crops.

Mr. Chairman this completes my prepared statement. I would be pleased to answer any questions that you or Members of the Subcommittee may have.

ATTACHMENT I

United States Department of Agriculture's Pesticide and FIFRA-Related Programs

Dollars in millions

Program name	Purpose of program	Agencies involved[a]	Funding for FY 1992
Pesticide Data	Collect and analyze data on pesticide use and pesticide residues data for domestically produced fresh fruits and vegetables.	AMS, EPA, ERS, HNIS, NASS, FDA	$16.5
IR-4 Pesticide Residue Research Project	Conduct research to determine residue levels from various pesticide uses on minor crops and biorationals. Results support pesticide registrations at EPA.	ARS, CSRS, EPA, FDA	6.0
National Agricultural Pesticide Impact Assessment	Develop biologic and economic analyses of the impact of chemical pesticides and other pest control alternatives used in agriculture.	ARS, CSRS, ES, ERS, FS	8.7
Pesticide Applicator Training	Provide educational materials to, and training programs for, restricted-use pesticide applicators.	EPA, ES	1.7
Integrated Pest Management-Research and Education	Develop systems of pest control that can replace sole reliance on scheduled chemical pesticide treatments.	ARS, CSRS, EPA, ES, FS	48.7
Pesticide Recordkeeping	Require private applicators to maintain pesticide application records and develop data collection surveys and reports on pesticide use.	AMS, ES, NASS	2.5
Laboratory Accreditation	Ensure that private laboratory information reported to the public concerning pesticides meets minimum quality and reliability standards.	AMS	1.4
Pesticide Residue Monitoring and Regulation	Ensure that meat, poultry, processed egg products, and imported tobacco do not contain unlawful pesticide residue levels.	AMS, FSIS	3.4

ATTACHMENT I

Program name	Purpose of program	Agencies involved[a]	Funding for FY 1992
Pest Suppression and Wildlife Control	Control and eradicate infestations that threaten agricultural production and wildlife.	FS, APHIS	82.6
Agricultural Protection and Quarantine	Act as the nation's major defense in preventing agricultural pests from entering into the United States.	APHIS	123.6
Water Quality Initiative	Provide agricultural producers with information necessary to voluntarily adopt environmentally sound management practices, among other things, that do not sacrifice profitability.	APHIS, ARS, ASCS, CSRS, ERS, ES, FmHA, FS, NAL, NASS, SCS	208.1
Sustainable Agriculture Research and Education	Provide support for agricultural research and education projects with emphasis on environmental quality and resource conservation	ASCS, ARS, CSRS, ERS, ES, NAL, SCS, APHIS	6.7

[a]Agency names are abbreviated as follows:

AMS	Agricultural Marketing Service
APHIS	Animal and Plant Health Inspection Service
ARS	Agricultural Research Service
ASCS	Agricultural Stabilization and Conservation Service
CSRS	Cooperative State Research Service
EPA	Environmental Protection Agency
ERS	Economic Research Service
ES	Extension Service
FDA	Food and Drug Administration
FmHA	Farmers Home Administration
FS	Forest Service
FSIS	Food Safety and Inspection Service
HNIS	Human Nutrition Information Service
NAL	National Agricultural Library
NASS	National Agricultural Statistics Service
SCS	Soil Conservation Service

Source: Table compiled from USDA data.

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