

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

MAY 12 1994

OFFICE OF PREVENTION, PESTICIDES AND TOXIC SUBSTANCES

To All Workshop Participants and Interested Parties:

Enclosed is the Report for the Pesticide Use/Risk Reduction Initiative Workshop (the "Workshop") held on February 2-3 in Crystal City, Virginia and sponsored by the United States Department of Agriculture (USDA), the United States Environmental Protection Agency (EPA) and the United States Food and Drug Administration (FDA). I believe the Workshop was a useful beginning to a process that will yield a comprehensive pesticide use/risk reduction strategy for both agricultural and non-agricultural uses of pesticides. I greatly appreciate the input we received from Workshop participants and we wish to thank all those who participated for their time and effort.

In addition to providing you with the Workshop Report, I also wanted to let each of you know where we currently stand on the pesticide use/risk reduction initiative. Several things are worth noting:

- ♦ USDA and EPA have started a dialogue with several grower organizations regarding the development of commodity-specific pesticide use/risk reduction strategies for their crops. Participating grower organizations have stated their willingness to develop strategies designed to reduce use/risk where it is feasible to do so. We anticipate being able to announce firm proposals from several grower organizations by October 1, 1994.
- ♦ EPA has started a dialogue with non-agricultural users of pesticides regarding their ability to reduce use/risk of pesticides.
- ♦ USDA, EPA and FDA have begun work on the development of an overall pesticide use/risk reduction strategy covering agricultural and non-agricultural uses. We anticipate having a draft of this strategy ready for review and comment by interested parties by December 1994.
- ♦ The Office of Pesticide Programs of EPA will hold a workshop on June 13-15, 1994 in Crystal City, Virginia which will cover many pesticide program activities including a session devoted to this initiative and a discussion of topics relevant to the development of an overall strategy.

EPA 731/ 1994.1



- ♦ EPA has established, on its own initiative, an exemption from the requirement of a tolerance for residues of arthropod pheromones resulting from the use of these substances in retrievably sized polymeric matrix dispensers with an annual application limitation of 150 grams active ingredient per acre or pest control in or on all raw agricultural commodities (RAC).
- ♦ EPA has registered acetochlor, a herbicide, under standards that require the demonstration that it ill reduce overall risk and use of all herbicides used on its registered sites.
- ♦ EPA has continued implementation of its reregistration fee deferral policy for biological pesticides which enables safer biological pesticides to remain on the market.
- ♦ EPA has continued developing and implementing its "safer pesticides" policy which will speed up the registration process for safer pesticides.

Finally, I want to reiterate that we view the initiative as an opportunity for affected interests to participate in the development of pesticide policy and welcome comments on the process, specific aspects of pesticide use or risk, or our efforts to date. If you do wish to comment, please forward your comments to the individuals named on the last page of the enclosed Workshop Report.

Very Truly Yours,

Allen L. Jernings, Director

Biological and Economic Analysis Division

Enclosure

WORKSHOP REPORT

PESTICIDE USE/RISK REDUCTION WORKSHOP FEBRUARY 2-3, 1994 CRYSTAL CITY, VIRGINIA

Held by:

The United States Department of Agriculture The United States Environmental Protection Agency The United States Food and Drug Administration

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I. INTRODUCTION

This Report is intended to summarize the views and opinions offered by participants in the Pesticide Use/Risk Reduction Workshop sponsored by the United States Department of Agriculture (USDA), the Urited States Environmental Protection Agency (EPA) and the United States Food and Drug Adm istration (FDA) held on February 2-3, 1994 in Crystal City, Virginia (the "Workshop"). It is not intended to represent any particular policy consensus reached by participants in the Workshop. Moreover, because this Report is a summary document, it may not capture each and every view or opinion offered. Rather, its intent is to set forth the major themes, issues, and ideas outlined during the Workshop.

II. BACKGROUND

On February 2-3, 1994, USDA, EPA and FDA hosted the Workshop in an effort to obtain input from a wide-range of interested parties on the joint federal pesticide use/risk reduction initiative jointly undertaken by USDA, EPA and FDA and announced in June 1993 (the "Initiative"). Workshop participants consisted of over 150 individuals from a wide-range of sectors including federal and state governments, growers, food processors, public interest groups, chemical manufacturers, trade associations, researchers and consultants. Workshop participants were invited in a manner to insure that all affected interests would have a representational voice at the Workshop.

The Workshop was structured to consist of four main substantive segments. A complete agenda for the Workshop and a list of attendees is attached to this Report as Appendix A. The first segment consisted of plenary keynote addresses outlining the Administration's view of the Initiative given by James R. Lyons, Assistant Secretary for Natural Resources and Environment, USDA, Dr. Lynn Goldman, Assistant Administrator, Office of Prevention, Pesticides and Toxic Substances, EPA, and Dr. Catherine Carnevale, Acting Director, Executive Operations Staff, FDA on behalf of Michael Taylor, Deputy Commissioner, FDA. A summary of those addresses is contained below.

The second segment centered around a breakout session designed to elicit views and opinions on the merits of the Initiative. Eight main facilitated breakout groups were formed to provide such views and opinions through brainstorming. Each breakout group was constituted to provide diversity in its constituent members to encourage dialogue among parties with differing views and opinions. Following the work by the breakout groups, each group was asked to present a summary of their views and opinions via a plenary reporting session. A summary of the views and opinions offered by participants in the second segment is set forth below.

The third segment consisted of a breakout session designed to identify the essential elements of a successful pesticide use/risk reduction strategy. Using the same breakout groups

as in the earlier session, each group was asked to brainstorm the appropriate elements. Following the breakout session, each breakout group presented a summary of their essential elements to all participants in the Workshop via a plenary reporting session. A summary of the identified essential elements is contained below.

Finally, the fourth segment was another breakout session designed to address specific aspects of the Initiative. This time, the breakout groups were self-selected and addressed the following topic areas: Research, Measuring Progress, Alternatives, and Incentives and Disincentives. Like the earlier segments, each breakout group used a plenary reporting session to report back to the participants in the Workshop. A description of the input received in connection with each topic area is provided below.

III. KEYNOTE ADDRESSES

Assistant Secretary James R. Lyons gave the first address and commented on the workshop as an example of the strong working relationship among federal agencies that has characterized the Clinton Administration's approach to pesticide issues. Assistant Secretary Lyons outlined several important ideas to be kept in mind as USDA and EPA work toward developing use and risk reduction strategies. The primary objective of efforts should be on risk reduction, with appropriate reductions in use serving to accomplish the reduction in risk. Any strategy adopted should be based on a whole systems approach to ensure that reducing risks in one area will not lead to increased risks in another area. Involvement of producers and producer groups from the beginning and at each step in the process is essential. Since reductions can only take place as a result of decisions and actions by producers on their farms, they must be actively ir volved in the planning and implementation of this strategy. Just as important, is the need for establishing a public consensus on the goals and process for this strategy. The emphasis of USDA's reinventing government is renewed focus on the needs of our customers, both in agriculture and in the general public. Assistant Secretary Lyons noted that the workshop process is part of USDA's larger effort to work with and on behalf of its customers in developing major initiatives.

Assistant Administrator Lynn Goldman followed Assistant Secretary Lyons and stressed the importance of achieving real and meaningful risk reduction while at the same time maintaining economically-viable crops for growers. Dr. Goldman stressed that it was important for the federal government to strike a balance between risk reduction and cost-effective methods of pest control. Further, she reiterated that the federal government was not merely seeking to reduce the volume of pesticide use across the board but rather was tying the reduction in use to a reduction in risk in the context of maintaining economically-viable crop production. Dr. Goldman also stressed the importance of building any pesticide use/risk strategy with a grassroots effort and that the federal government must change the way in which it regulates pesticides. Finally, she noted that the federal government would be emphasizing commodity-

specific pesticide use/risk reduction strategies in the near-term that would not be a "one size fits all approach".

Dr. Catherine Carnevale concluded the keynote addresses by stressing that the Administration's pesticide reform efforts are a truly cooperative venture among USDA, EPA and FDA. She noted that pesticide use and risk reduction is the key to better protecting the public health, and especially children. Dr. Carnevale pointed out that FDA, for its part, has already changed its pesticide residue monitoring program to include more children's dietary staples and is working to set-up a centralized database to house residue data generated by federal agencies, states and industry. She urged the federal government and workshop participants to be creative and work together to develop new and old ideas to reduce pesticide risks and uses.

IV. BREAKOUT SESSION #1

Issue: What do you think of a pesticide use/risk reduction strategy? Identify the pros and cons. Set priorities.

In the first breakout session, the eight breakout groups were tasked with addressing the issues outlined above. The groups generally thought that it was worthwhile for the federal government to pursue a strategy that would address the role of pesticides in the United States. However, a constant theme throughout the breakout groups was the necessity of defining whether the strategy would be based upon use reduction or risk reduction. For many participants, their commitment to supporting the general strategy depended on the resolution of this issue. Participants' views on whether the strategy should be driven by use reduction considerations or risk reduction considerations differed. The following represents a summary of the advantages and disadvantages outlined by the breakout groups of pursuing either approach:

A. Risk Reduction

Advantages

- ▶ Focuses attention on the ultimate goal of environmental and human health safety: reducing risk
- ▶ More incentives for chemical industry participation

- ▶ Promotes the prioritization of pesticide risks
- ▶ Allows continued use of safer pesticides

Disadvantages

- ▶ Difficult to measure risk
- ▶ Complexity of risk trade-offs makes overall risk reduction difficult
- ▶ May increase public apprehension about existing risks

B. Use Reduction

Advantages

- ▶ Ease of measurement
- ► Clear baseline and goals
- ▶ Reduces input costs to producers
- ► Gives high priority to all risks
- ▶ Promotes non-chemical control methods

Disadvantages

- ▶ If volume is the metric, may force substitution to higher-risk, lower-application-rate pesticides, leading to an increase in risk
- ▶ Disincentive to research/development of safer pesticides
- ▶ May increase economic risk to growers without reducing corresponding health and environmental risks
- ▶ May disproportionately impact minor use crops

Apart from the issue of use reduction versus risk reduction, the breakout groups also identified the pros and cons of a pesticide use/risk reduction strategy:

C. Pros

- ▶ Encourages communication and coordination between federal agencies and affected interests
- ▶ Focuses attention on education
- ▶ Stimulates funding for and prioritizes research
- ▶ Reduces risks to humans and the environment
- ► Increases public confidence in the food supply
- ► Encourages safer pesticides
- ▶ Supports sustainable agriculture and IPM practices
- ▶ Decreases input costs to agriculture
- ▶ Improves worker and applicator safety
- ▶ Comprehensive approach to pollution prevention and agricultural production
- ▶ Opportunity to be proactive and gain public confidence
- ▶ Encourages more efficient use of pesticides
- ▶ Promotes alternative pest control methods/technologies
- ▶ Creates international trade advantages for U.S. commodities
- ▶ U.S. will take a leadership role with respect to pesticide policy

D. Cons

- ▶ Decreases the tools to manage pest problems
- ► A national strategy may ignore local needs

- ► Creates a strain on government resources
- ▶ May create unrealistic expectations or achieve unintended results
- Decreased quality and yields of certain commodities
- Loss of alternatives for minor use crops
- ► Complexity of issues makes implementation difficult
- ▶ May increase economic risks to growers, processors, and consumers
- ▶ Possibility of limiting variety of food supply
- Complexity of measuring risks makes risk reduction difficult
- Conflicting environmental concerns (e.g., soil conservation vs. reduced pesticide use)
- ▶ Necessitates risk trade-offs or transfers
- ▶ Consumer resistance to reduced cosmetic quality

V. BREAKOUT SESSION #2

Issue: What are the essential elements of a successful use/risk reduction strategy?

The breakout groups identified many elements of a successful use/risk reduction strategy in a number of areas including: goals, measurements, process, policy, education and technology transfer, economics and research and development. Set forth below is a summary of the elements that the breakout groups identified:

A. Goals

- ▶ Demonstrable reduction in risks/use
- ▶ Set realistic, concrete short- and long-term goals

B. Measurements

- ▶ Identify baseline pesticide usage
- ▶ Develop comprehensive perficide usage database and require broader reporting
- ▶ Develop risk indices for human health and environmental endpoints
- ▶ Design a comprehensive program for measuring and evaluating progress

C. Process

▶ Design strategy based upon input of affected interests:

growers
public interest groups
food processors
chemical industry
non-agricultural users (homeowners, institutions, etc.)
regulators
economists
scientists/researchers
extension agents
educators
land owners
insurance industry
financial institutions

- ▶ Create mechanism for communication and participation of affected interests
- ► Establish and clarify role of federal/state agencies in the development, implementation, and enforcement of the strategy
- ▶ Communication and coordination between federal departments and agencies
- ► User (grower and non-agricultural user) buy-in to strategy

D. Policy

- ▶ Strategy should include both agricultural and non-agricultural uses
- ▶ Specify and prioritize risks to be addressed
- ▶ Identify viable production practices that may reduce use/risk
- ▶ Define role of IPM and fund IPM education/training
- ▶ Define what "safe" means
- ► Address regional and local needs, differences in ecosystems and agricultural practices, pest resistance, and public health needs
- ▶ Include government and market-based incentives for users and manufacturers
- ▶ Government must lead by example; government pesticide practices must be consistent with strategy
- ► Incorporate agricultural support programs into strategy
- ▶ Include commodity-specific strategies for agriculture
- ▶ Address registration issues: promote faster review of safer pesticides; deregulate certain classes of pesticides (GRAS); streamline overall process to support strategy
- ► Identify and address international trade concerns
- ► Include non-chemical and natural biological controls
- ▶ Identify sources of funding for overall strategy

E. Education and Technology Transfer

- ► Technology exchange/transfer
- ▶ Education and training of growers in practices and technologies that reduce use/risk
- ▶ Promote public education of the consumer on cosmetic appearance

F. Economics

- Financial support for growers in transition period
- ▶ Strategy should maintain long-term economic viability for growers

G. Research and Development

- ▶ Prioritize and fund research for chemical and non-chemical alternatives and technologies that reduce use/risk
- ▶ Research should be focused on developing safer, cost-effective control methods

VI. BREAKOUT SESSION #3

During Breakout Session #3, self-selecting breakout groups were asked to provide input on specific areas impacting pesticide use practices in the United States. The areas that were addressed included: Research and technology; Incentives/Disincentives; Alternatives; and Measuring Progress. The following represents the ideas generated by those breakout groups:

A. Research and Technology Transfer

1. Priorities

- ▶ Research should be problem-based
- ▶ Integrate national framework and specific regional needs, i.e., to reach national goals, priorities should be based on regional needs and problems
- ▶ Develop incentives for technology transfer
- ▶ Establish mission/purpose based on risk factors, use factors, and extent of need for alternatives
- ▶ Grower needs, problems, and input essential

- ▶ Public/private participation and input
- ▶ Evaluate current status of specific pest problems, lack of tools, risk concerns, available resources, and need for training
- Include international work in terms of affecting markets and technology transfer where applicable to U.S.
- ▶ Goals should be feasible, achievable
- Integrate pest management with other production practices and with ag/ecosystem research programs
- ▶ Improve coordination and cooperation of state and federal government, extension agents, industry, and national growers organizations
- Greater emphasis and effort on outreach/extension (public and private)

2. Funding

- ▶ Funding should be adequate to support essential risk/use reduction research projects
- ▶ Sources of funds: reallocation of current resources and new funds from public/private sectors
- ▶ Efforts should be funded by: commercial development, federal government and states, tax on pesticides and consumers, and commodity check-off programs
- Invite public/private input in funding decisions

3. Use/Dissemination of Results

- Strengthen and broaden support for information and application delivery system
- Expand, improve, and link national research data bases
- ▶ Open up research data bases to public
- ► Implementation of promising research results through education, training, and technology transfer

4. Roles of Public/Private Sectors

- ▶ Identify and define roles
- ▶ Government must lead by example, e.g., research must include federal land
- ▶ Roles and relationships tailored at national and regional level
- ▶ Suggested tasks of private and public sectors:

PRIVATE

ADOPTION OF PRACTICES/TECHNOLOGY TRANSFER
(INCENTIVES FOR INDUSTRY/PRIVATE)
NEW COMMERCIAL DEVELOPMENT
BASIC RESEARCH WHEN MARKET DEMANDS
MARKET DRIVEN
IDENTIFY NEEDS
OPPORTUNITY FOR INPUT

PUBLIC

LACKING COMMERCIAL INCENTIVE
INTEGRATION OF STRATEGIES
TECHNOLOGY TRANSFER/EDUCATION & TRAINING
IMPARTIAL EVALUATION
DEMONSTRATIONS
LEADERSHIP
BIOLOGICAL-BASED
IDENTIFY NEEDS
RAISE PRESTIGE OF APPLIED RESEARCH AMONG PEERS, ACADEMIA
& FEDERAL GOVERNMENT
MARKETING PLANS
COMMUNICATION
NEW MARKETS
TRAIN CONSTITUENTS

B. Incentives/Disincentives

1. Incentives

Government/Regulatory

- ▶ Streamline the registration process by reducing fees, green labeling, reducing timeline, deregulating GRAS, and ensuring an effective/reliable cancellation process
- ▶ Incentives for development of pest controls for minor use crops
- ▶ Deregulate non-chemical controls
- ▶ Consistency of state and federal regulations, and possible consolidation
- ▶ Remove commodity program constraints
- ► Expedited regulatory process for "lower" risk pesticide products
- ▶ Integrate federal procurements (e.g. WIC, school lunch program) with reduced use/risk strategy
- ▶ Decoupling of commodity support programs
- ► State/federal/international harmonization for R&D incentives
- ▶ Crop insurance and guaranteed loan programs supporting reduced risk/use technologies and practices
- ▶ Tax breaks for R & D

Consumer/Marketplace

- ▶ Grower tax breaks for new pesticide reduction technology
- ▶ Labeling options for consumer end-products
- ► Liability insurance for pest control advisors

- ► Green labeling (product, pesticide)
- ▶ Support creation of local farmers' markets

2. Disincentives

Government/Regulatory

- ► Taxes: mill tax and toxicity tax
- ▶ User fees
- > Stronger regulatory enforcement mechanisms and funding
- ▶ Pesticide labeling of environmental impact
- ▶ Phase out riskier pesticides coupled with introduction of replacements
- ▶ Develop criteria for non-registration

C. Alternatives

1. Criteria for Selection

- ► Cost
- ▶ Performance
- ► Risk
- ► Feasibility
- ▶ Labor
- ► Externalities such as water pollution, social costs, soil erosion, air pollution, wildlife/ecology, and health costs

- ▶ Energy
- ▶ Regional/local differences
- Consumers
- ▶ Market competition
- ▶ Grower transition costs
- ▶ Loan programs tied to commodity programs
- ▶ Reassurance of banking community

2. <u>Alternative Controls</u>

- Integrated Pest Management and Integrated Farm Management
- ▶ Mating disruption
- ▶ Crop rotation
- ▶ Biological control agents
- Microbial pesticides
- Softer chemicals
- Semiochemicals
- ▶ Organic production management
- Cultural practices such as seed diversity and tillage practices
- ► Accessing alternatives through models
- Resistance management
- Increased use of dynamic thresholds

- ▶ Alternatives that preserve beneficial insects
- ► Information delivery system
- ▶ Technology transfer and training
- ▶ Gaining more knowledge of multiple pest complexes in crop production systems (i.e., of interrelationships, population genetics, crop production models, and component pest models)
- ▶ Lower risk, lower rate chemicals
- ▶ Growth regulators
- ▶ Genetic engineering
- ▶ Irradiation for crop storage
- ▶ Applicator training in alternative control methods
- ► Application technology
- ▶ Cultural practices including crops to attract/trap beneficials, orchard floor management, cover crops, crop rotation, physical barriers, economic pest thresholds, parasite/predators, sterile males
- ▶ Breeding for host plant resistance/increase diversity

3. <u>Issues</u>

- ▶ Enhancing ability to register new products, i.e., streamline regulatory process, educate public about regulatory process, reduce cost and time of registration
- ▶ Inclusion of farm economics into the assessment of reduced risk potential of alternatives
- Subsidies for IPM adoption
- ▶ Economic feasibility of alternatives
- ▶ Resistance tracking monitoring

- ▶ Maintain variety of chemical classes as alternatives to reduce risk
- ▶ Research funding for alternatives
- ▶ Incentives for development of alternatives

4. Complicating Factors

- ▶ Prioritization of risks, i.e., economic, environmental, and human health
- ▶ Alternatives are not always substitutes
- D. Measuring Progress
- 1. Measures
- ▶ Full Pesticide Use Reporting

COMPREHENSIVE NATIONAL SYSTEM
AG & NON-AG
RESTRICTED & GENERAL USE PESTICIDES
NATIONAL DATA STANDARDS & COLLECTION SYSTEM TO INDICATE
VOLUME, FREQUENCY OF APPLICATION, PEST TREATED AND
ACRES TREATED
PROVIDE INFO ON USE OF DIFFERENT TOXICITY CLASSES
FIX BASELINE -- MEASURE CHANGE OVER TIME

- ► Acute Human Health Reporting System
- ▶ Integrated Pest Management

EXTENT OF IPM ADOPTION % ACRES UNDER IPM

► Alternatives

EXTENT OF USE

2. Monitoring Impacts of Use

Ecosystem Effects

IDENTIFY CURRENT MONITORING: GROUND WATER TISSUE LEVELS, ENDANGERED SPECIES, PESTICIDE INCIDENTS EXPLORE USE OF EMAP INDICATORS OF ECO CONDITIONS

▶ Human Health Impacts

PRODUCER/USER/WORKER/CONSUMER/BYSTANDER DEVELOP SURVEILLANCE FOR CHRONIC IMPACTS

▶ Economic/Efficacy Impacts on Users

3. Measuring Risk Reduction

- ▶ Define and measure baseline risks; develop risk indices to measure changes (human health and environmental endpoints)
- ► Risk/Hazard defined by studies (toxicity, environmental, residues)
- ▶ Incidents (but must be evaluated to determine causes)

VII. CONCLUSION

The Workshop concluded with a wrap-up session in which Douglas D. Campt, Director of the Office of Pesticide Programs, EPA and Larry Elworth, Special Assistant to the Assistant Secretary for Natural Resources and the Environment, USDA gave concluding remarks. Mr. Campt noted that the workshop generated a lot of good ideas and raised several issues that the federal government must deal with earnestly if it is serious about a pesticide use/risk reduction initiative. Mr. Campt then outlined some of the major themes and open issues that were identified by the participants. He noted that:

• the issue of risk reduction versus use reduction is real and there are differing opinions. The federal government must be clear to define exactly what it means when it says pesticide use/risk reduction and that the policy it pursues achieves its commitment to reducing risks to humans and the environment while maintaining cost-effective pest

control methods for growers.

- the need for communication between the federal government and stakeholders is important in two respects. First, the pesticide use/risk reduction strategy should be based upon the input of affected stakeholders and second, the federal government must communicate with stakeholders on a regular basis, to let them know about its proposals and to obtain input/feedback from them.
- interagency communication/coordination is important to laying the groundwork for a successful strategy.
- the federal government must change the way it does business; it must integrate pesticide use/risk reduction policies into everyday programs and it must reform existing programs to support the goal of pesticide use/risk reduction.
- the federal government should lead by example with respect to any strategy with respect to its programs and uses of pest management techniques.

Mr. Elworth then concluded the Workshop by thanking participants for their input and reiterated that the input received would be of great value to the Administration in its efforts to develop an appropriate pesticide use/risk reduction strategy. He reminded participants that the development of a strategy was an on-going effort and that continued input would be welcome following the Workshop.

VIII. COMMENTS

Additional written comments about the Workshop, this report or the pesticide use/risk reduction initiative should be addressed to: Martin S. Lewis, Special Assistant, Biological and Economic Analysis Division, Office of Pesticide Programs, US EPA, 401 M Street, S.W., Washington, D.C. 20460; or Larry Elworth, Special Assistant, Natural Resources and Environment, USDA, 14th and Independence Avenue, S.W., Rm. 217E, Washington, D.C. 20250.

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