UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

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THE ADMINISTRATOR

Melanie A. Marty, Ph.D.
Chair
Children's Health Protection Advisory Committee
Cal/EPA, Office of Environmental Health Hazard Assessment
1515 Clay Street, 16th Floor
Oakland, California 94612

Dear Dr. Marty:

Thank you for your providing me with the Children's Health Protection Advisory Committee's review of pesticide-related health risks to farm workers. Your review raised concerns about the adequacy of current protections for farm worker children and made suggestions for risk reduction activities for the U.S. Environmental Protection Agency to consider.

We share your concerns for safeguarding farm workers and their children from potential pesticide-related risks. As you know, the National Pesticide Program has an extensive set of programs designed to collectively reduce these potential risks. EPA's programs and activities include thorough risk assessment and risk management on individual pesticides; worker protection regulations; training and education; compliance efforts; and partnerships with states, tribes, and stakeholders. While these provide a high level of protection, we are constantly looking for opportunities for further enhancements.

Several of your suggestions are particularly timely because we recently launched a rulemaking effort to amend our worker safety rules. Some of the areas you identified for attention are already under consideration in that process (e.g. hazard communication). This initiative is an outgrowth of a multi-year process to examine the strengths and deficiencies of our existing worker protection programs. That assessment engaged a wide range of stakeholders through public meetings and workshops to help us develop a well-rounded understanding of the nature of stakeholders' issues and concerns. As a result of our findings, we have already made a number of program management adjustments. The stakeholder concerns and the Agency's response to them are contained in *The Report on the National Assessment of the Pesticide Worker Safety Programs* (http://www.epa.gov/oppfead1/safety/workshops.htm).

As you will see in the report, there are some concerns that can only be addressed by changing our regulations. I have enclosed both a presentation that we recently made to one of our federal advisory committees, the Pesticide Program Dialogue Committee, and a summary of

ongoing Office of Pesticide Program worker protection activities. These enclosures describe the range of potential changes that we are considering. There will be opportunities for stakeholders to stay informed about this action and provide input as the rulemaking proceeds. One such avenue is the creation of a PPDC workgroup of stakeholders to provide feedback to the Agency regarding this effort. Ms. Shelley Davis, a CHPAC member, participates on that workgroup. We will give full consideration to your suggestions in the rule development process and in other program management work. A third enclosure provides further information on some of our activities relative to specific issues addressed in your letter.

If you have any questions or need further information, please contact me or call Susan Hazen, Acting Assistant Administrator for the Office of Prevention, Pesticides, and Toxic Substances, at (202) 564-2902.

Again, thank you for writing. I look forward to working with you and the Committee's other members as we address these important issues.

Sincerely,

Stephen L. Johnson

Enclosures

The CHPAC letter identified a number of issues in three broad areas. The following discusses some of the current Agency actions in those areas.

A. Strengthening the Worker Protection Standard (WPS)

1. Training to Modify Worker Behavior

Currently, the WPS regulation requires retraining for agricultural workers at least every five years. CHPAC suggests that this interval is inadequate. Based on the substantial input from stakeholders regarding the issue of shorter re-training intervals, as part of regulation development process, EPA will carefully consider a requirement for more frequent re-training in the rulemaking. You also suggest that training for farm workers be expanded to include information about how to protect their families from take-home pesticide exposures. This, too, is under consideration as we develop training materials and initiate grant projects to enhance pesticide worker safety training.

2. Hazard Communication

Effective hazard communication is an important means to ensure workers understand the risks chemicals may pose in the workplace. As you note, the Agency is considering adding additional requirements for hazard communication to the WPS. We are developing pilot studies to test appropriate communications vehicles and content. The purpose of this hazard communication pilot work is to determine the most effective strategies for communicating to agricultural farm workers the risks/hazards associated with working around pesticides. We will use this information to develop a technically sound regulatory proposal for pesticide hazard communication.

3. Access to Changing Facilities at the Work Site

It is important for pesticide workers to understand that they may carry home pesticide residues on their work clothing and that changing clothes and washing can limit the amount of take-home exposure. We stress this in our safety training materials and safety training programs. The current regulations require that the basic safety training tells workers to wash or shower with soap and water, shampoo hair, and put on clean clothes after work. Your concern for access to changing facilities at the work site is beyond our regulatory jurisdiction and can best be addressed by the Department of Labor. We intend to bring this issue to their attention.

4. Protecting Young Farm Workers: Reducing Exposures While Mixing, Loading, and Applying

Farm workers under the age of 16 are not permitted to handle toxicity category 1 and 2 pesticides, but as you note, certain category 3 and 4 pesticides can pose chronic risks. You also note that NIOSH has recommended that the Secretary of Labor designate all pesticide activities as hazardous to prevent this age group from being exposed to pesticides during handling activities. We agree that an age limitation on pesticide handling activities is worthy of consideration and are evaluating the issue in the rule development process.

5. Ensure Young Farm Workers Have Respiratory Protection

You note that OSHA standards for respirators require fit testing. In most cases, labeling for pesticide products that require respirators includes requirements for fit testing for all respirator users. Because there are labels that do not carry this information, we are considering amendments to the labeling regulations to require that information on all labels.

6. Strengthen WPS Enforcement

State regulatory agencies are delegated enforcement authority for the agricultural worker protection regulation. The Agency provides state and territory assistance grant funds to support the implementation and the enforcement activity in pesticide programs. As a result of our program assessment, we have established much more detailed guidance and grant requirements for program implementation, program enforcement, program oversight, and program accountability.

B. Reducing Exposures from Pesticide Drift

Pesticide drift is an important issue to EPA, states, local governments, pesticide producers and users, farm workers, and the general public. Stakeholders have many diverse opinions on how to address the issues. Because of the range of opinions related to pesticide spray drift, the Agency is forming a workgroup under the Pesticide Program Dialogue Committee, to focus on this issue. This workgroup will have representation from our key stakeholders, including environmental advocates, and will provide insights and recommendations to the Agency related to spray drift.

You suggest that EPA's risk assessments underestimate drift exposure to farm worker children because post-application drift is not assessed. We believe that applicators and, to a lesser extent farm workers, are usually the most-exposed populations. Therefore, when data indicate that post-application movement of pesticides away from the treated area is limited and when we make the finding that risks are acceptable for these workers populations, we believe that we are protective of bystanders and others that may be incidentally exposed. To the extent that post-application movement may be significant, EPA performs a more detailed risk assessment, as we are currently doing for soil fumigants.

1. Require prior notification of pesticide spraying

Historically, the Agency has found that notification programs may be beneficial when they are tailored to local conditions. We encourage notification and believe that it can best be carried out at the State and local level. A number of state and local governments do require notifications. We will consider the merits of federal regulatory or non-regulatory action on this suggestion as we continue development of the rule.

2. Explore effectiveness of no-spray buffer zones

EPA's Office of Pesticide Programs has used no-spray buffer zones, along with other regulatory measures to mitigate potential risks from drift of pesticide sprays. OPP's goal is to employ risk mitigation measures, tailored by our estimates of potential risks and the use of each pesticide, that when followed by the applicator will prevent unreasonable adverse risks to human health or the environment.

For example, for those pesticides which EPA believes may pose a significant risk from off-target spray drift, we may require a number of mitigation measures, including a buffer zone, for applicators to follow. Those pesticides which pose lower risks will generally have fewer specific requirements.

In addition, EPA's Office of Pesticide Programs and Office of Research and Development have initiated a Drift Reduction Technology project. The goal is to achieve improved environmental and human health protection through drift reduction by accelerating the acceptance and use of improved and cost-effective application technologies that when used properly have the potential to significantly reduce pesticide spray drift. The OPP-ORD team is modeling its process after ORD's Environmental Technology Verification program which has successfully partnered with a variety of industry sectors on over 300 projects to develop test methods to verify existing or new technologies to help solve important environmental problems. The Agency believes that these approaches will provide valuable insights into potential risk-reduction options for drift management.

3. Develop and field-test comprehensive drift models

EPA uses scientific models to estimate the potential extent of off-target spray drift which is one of the exposure components of our risk assessment for each pesticide. The development and programming of these models (AgDrift and AgDISP) are based on numerous field and laboratory studies that characterize drift under a wide variety of meteorological, application and crop conditions. EPA, USDA and industry experts are continually updating and improving these models as our understanding of drift, application technology and methods, and meteorological conditions improves. Before the initial use of these models, and as significant revisions have been made, we engaged external drift experts to peer review the models.

These models reflect real-world conditions and include all key variables for drift, including application equipment (ground boom, aerial, and air blast), climate conditions, spray release height, and droplet size. We then compare the projected drift of the pesticide with its toxicity and use patterns to assess risk. The Agency uses the most up-to-date information available and considers all appropriate parameters in developing drift risk estimates. To the extent resources allow, EPA is researching how to better understand and deal with secondary transport issues such as re-volatilization and movement of contaminated dust.

4. Develop specific drift-control strategies

As discussed above, EPA develops pesticide-specific drift control or mitigation requirements based on our estimates of potential spray drift and the associated risks from the use of the pesticide. As we assess applications for new pesticides and re-evaluate older pesticides

through our re-registration program, and future re-registration program, we determine and impose detailed requirements and limitations, including maximum wind speed, application spray height, droplet size, meteorological conditions, and, if necessary, buffer zones.

C. Reducing Data Gaps through Research

CHPAC identified a number of areas for research to obtain expanded knowledge for decision-making. The areas you mention include research on environmental transformation products and their relationship to human metabolites, the development of practical approaches to collecting metabolite levels in humans, improved information on metabolite levels in pregnant and nursing mothers and their children, and the development of comfortable, practical PPE for workers.

We concur that the data on environmental transformation products and their relationship to human metabolite levels is needed. Although there have been strides made in this area, the contribution from other non-pesticide sources to levels of metabolites in the body remains unclear. Similarly, further information on metabolites in the urine of pregnant and nursing women could help us better understand this complex issue.

The availability of metabolite data closely linked to exposure is desirable, as it could potentially link application exposure to metabolite levels. We would agree that this too is useful information. Low cost and less invasive collection of biomedia for metabolite assays, incorporating stable biomarkers, would enhance the collection of these data.

You have also mentioned the need to develop comfortable, practical PPE for workers. EPA is currently considering a proposal which would update the selection of these garments in terms of protection, comfort, maintenance, and use. We recognize that workers are more likely to comply with PPE requirements if they are comfortable, practical, and of reasonable cost.

Finally, you suggest that research is needed to help develop incentives to encourage growers to adopt reduced pesticide practices. Our Biopesticides and Pollution Prevention Division in the Office of Pesticide Programs houses the Pesticide Environmental Stewardship Program, a voluntary program that forms partnerships with pesticide users to reduce the health and environmental risks associated with pesticide use and implement pollution prevention strategies.

While government regulation can reduce pesticide risk, PESP is guided by the principle that the informed, voluntary actions of pesticide users can be a very effective means to reduce risk. There are currently 150 PESP members in the program, ranging from grower organizations to industrial pesticide users. By joining, organizations pledge that environmental stewardship is an integral part of pest control, and they commit to working toward pesticide practices that reduce risk to humans and the environment. Members take a strategic approach to risk reduction and undertake specific, measurable activities toward achieving their risk reduction goals. Typically, grower organizations represent farmers, and the commitments of the organization flow down to the farmer level.

In addition, BPPD manages the Agency's Strategic Agricultural Initiative which was created in 1998. This unique outreach program provides incentives to farmers through education, technical assistance and grant funding across the nation. EPA is phasing out some toxic and persistent pesticides because they are no longer considered safe for human health and the environment. As new alternatives are developed, farmers need help in adopting new biologically-based products and approaches to pest management. The Strategic Agricultural Initiative staff work directly with farmers to improve upon traditional pest management approaches and measure the impact of those changes on the environment and human health.