

Spray Drift Work Group Report to the PPDC

May 9, 2007

Background

- Jointly led by OW & OPP
- Five meetings: March 29, June 13, September 6, November 7, 2006 and March 7, 2007
- Broadly representative: 23 members from academia, application industry, chemical industry, public interest groups, federal & state agencies, and grower groups
- Mission statement

Process

- Face-to-face meetings and conference calls
- Group received presentations on:
 - CWA & FIFRA
 - The history of spray drift science and policy
 - OW's water quality protection programs
 - OPP's ecological risk assessment methods
 - California state water permits
 - Pesticide labeling
 - State perspectives & approaches
 - Education, Training & Stewardship programs
 - Drift Reduction Technology project
 - Workgroup member perspectives

Scope

Workgroup focused on:

- Labeling to mitigate spray drift
- The role of education, training and stewardship in drift mitigation.
- Practices and equipment to mitigate drift and adverse effects from drift.

Scope

Issues EPA decided were beyond the scope of this workgroup include:

- The NPDES rule
- Post-application volatilization drift.
- Post-application runoff pesticide movement.

Spray Drift Labeling

Findings:

- Inconsistent labeling across products
- Labeling requirements that are not enforceable
- Labeling statements that are
 - too wordy
 - actually increase drift potential
 - confusing, impractical, and / or contradictory
 - poorly organized and presented

Labeling Recommendations

- EPA should consider pursuing mechanisms (e.g., PR Notice, Label Review Guide) to standardize labeling statements across products and to improve spray drift mitigation labeling by using shorter, clearer, enforceable language.

Labeling Recommendations

EPA also should consider more far-reaching changes to pesticide labeling to ensure that provisions concerning spray drift receive enough prominence:

- Clearly identify and differentiate enforceable statements and advisory statements on the label.
- Place all relevant directions for each method of application, e.g., aerial, ground boom, airblast in a separate section.

Labeling Recommendations

- Establish a streamlined process that allows relevant stakeholders (e.g. commercial and non-commercial applicators, state regulators, public interest groups) to review generic label language to ensure that labels are clear, enforceable and practical.
- Utilize enforceable design and/or performance standards.

Design vs. Performance Standards

Should EPA formulate regulatory restrictions for spray drift in terms of design standards or performance standards?

- Design standard: requires specific equipment and / or applicator behavior.
- Performance standard: defines a required outcome but leaves the choice of how to achieve the outcome up to the applicator.

Thoughts on Design vs. Performance Standards

General agreement on the following points

- Relevant factors to consider: enforceability, efficacy of the application, efficacy at reducing spray drift, cost and practicality.
- Regulatory requirements - Need to be enforceable and should ensure that regulatory goals can be achieved.
- Labeling – Some design standards can actually increase drift potential. To minimize this problem, EPA should incorporate reviews by user groups into process for developing effective standard label statements.

The workgroup recognizes that both design and performance standards are potentially useful in reducing risks from spray drift. There is not a consensus on the relative weighting of these standards.

Education, Training and Stewardship

The workgroup recommends that training and education programs be continued or expanded, including federal funding provided for the programs.

Technologies to Mitigate Drift

Recommendations:

- Explore with appropriate experts and practitioners establishing performance standards for application equipment and practices designed to minimize drift.
- Encourage use of drift-reduction equipment and practices.
- Some participants suggested that EPA determine the economic feasibility of the new technologies and explore how best to facilitate rapid adoption.
- Continue support for the Drift Reduction Technology project, but ensure proper assessments of technology efficacy and ensure economic impacts of adoption do not deter the developments of new DRTs.

What is Spray Drift

Consensus:

- Spray drift means pesticide droplet and particle movement that occurs during the initial application resulting in deposition onto non-target sites.
- Spray drift does not include particle movement onto non-target sites caused by erosion, migration, volatilization or wind blown soil particles that occurs after application.

Tailoring Restrictions to Local Conditions

Findings:

- Applicator attention to geography, local weather conditions, cropping patterns, and the presence of people, domesticated animals and sensitive wildlife areas is essential to prevent harm from spray drift.

Tailoring Restrictions to Local Conditions

Recommendations:

- EPA should work with States and applicators to explore mechanisms that tailor regulatory requirements to local conditions.
- The mechanisms may impose additional, more stringent controls on pesticide use that are appropriate for the specific area where the pesticide would be applied.

Tailoring Restrictions to Local Conditions

Recommendations:

- EPA should evaluate effective methods of communication of local conditions to applicators.
- Possible models include the TMDL watershed management approach and the county bulletin approach under the Endangered Species Protection Program.
- EPA should explore the use of GIS systems to enhance communication of local conditions.

Determining the Real-World Impacts of Pesticide Labeling

Recommendations:

- EPA should strengthen the collection, use and public availability of information regarding real-world effects of its regulatory approaches including:
 - Collecting objective monitoring data of water quality & other environmental receptors
 - Information on enforcement actions by state
 - Incident databases (including both proper use and misuse)
 - Assessments of users' understanding of label statements

Determining the Real-World Impacts of Pesticide Labeling

Recommendations:

- EPA should consider whether real-world outcomes:
 - Raise questions about validity of modeling assumptions
 - Indicate that regulatory requirements are insufficient to prevent harm
 - Suggest that adverse effects are limited to highly unusual geographic, meteorological or other situation
 - Indicate that users are failing to comply with regulatory requirements.

Determining the Real-World Impacts of Pesticide Labeling

If the existing regulatory requirements have failed to produce the expected levels of protection, EPA should attempt to discern the reasons.

CWA/FIFRA Overlap

Finding:

- The workgroup was pleased that OW and OPP are working together to protect the nation's waters.

Recommendations:

- EPA should develop water quality criteria for current use pesticides for adoption by the States as water quality standards.
- EPA should provide resources for monitoring current use pesticides in water bodies

Issues Related to Spray Drift and “Harm”

Consensus

- All pesticides must meet the FIFRA standard for registration and use.

Harm

- The workgroup meaningfully explored differing ideas of what constitutes 'harm' from spray drift. However, the group did not agree on a central concept of harm.

Thoughts on Spray Drift & Harm: One Point of View

- EPA's goals for regulating spray drift should include:
 - Regulations and guidance that support the prevention of spray drift , including: encouraged use of non-chemical pest controls, restricted use of spray technologies, requirements for no-spray buffer zones)
 - Resolve ambiguities that applicators and enforcement staff now face in interpreting labels
- Issues pertaining to definition and regulation *re* “harm”:
 - Inserting FIFRA's “no unreasonable adverse effects” standard into the definition of “harm” undercuts state enforcement primacy, or enforcement authority granted to the States by FIFRA.
 - Potential harm should continue to be taken into consideration
 - Many states currently consider potential harm from drift, as does the WPS statement
 - Adverse effects may not be immediately obvious
 - Repeated, low-level, long-term exposures have been linked to disease

Thoughts on Spray Drift & Harm: One Point of View

- In light of the pragmatic challenges of field enforcement, the difficulties in “proving drift,” broad variability of modes of action and impacts of different pesticides, and the many scientific unknowns around long-term harm, we do not believe that EPA should endorse any level of off-target pesticide particle movement as acceptable.

Thoughts on spray drift and adverse effects from the Regulated Community

- FIFRA regulates pesticide registration and use.
- Zero drift is unachievable, and unrealistic.

Thoughts on spray drift and adverse effects from the Regulated Community

- Advancing technology allows detection of extremely small amounts of pesticide products.
- Some diminutive level of off site deposition is unavoidable, this may be *de minimis* if harm or unreasonable adverse effects does not result from it.

Harm or Adverse Effect

The workgroup was unable to come to a consensus on the issues of off target deposition and adverse effect or harm threshold.

PPDC Discussion