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Comments for Docket ID EPA-HQ-OPP-2009-0628.

Presented by the Weed Science Society of America (WSSA), the Entomological Society of America -Plant-Insect Ecosystems Section (ESA P-IE), and the American Phytopathological Society (APS).

On November 4, 2009, the Environmental Protection Agency (EPA) issued a Federal Register Notice entitled "Draft Guidance for Pesticide Registrants on Pesticide Drift Labeling" [74 FR 57166, 11/4/2009, Docket No. EPA-HQ-OPP-2009-0628], requesting comment on three documents: (1) Pesticide Registration Notice (PRN) Draft Pesticide Drift Labeling; (2) Draft Pesticide Drift Labeling Interpretation (Labeling Interpretation); and (3) Draft PRN Additional Information and Questions for Commenters.

The Weed Science Society of America (WSSA), The Entomological Society of America -Plant-Insect Ecosystems Section (ESA P-IE), and The American Phytopathological Society (APS) greatly appreciate the opportunity to comment on the EPA's Draft PR-Notice 2009-X and the documents related to that PRN above.

The Weed Science Society of America is a nonprofit professional society founded in 1956 to encourage and promote the development of knowledge concerning weeds and their impact on the environment. The Weed Science Society of America promotes research, education and extension outreach activities related to weeds, provides science-based information to the public and policy makers, fosters awareness of weeds and their impact on managed and natural ecosystems, and promotes cooperation among weed science organizations across the nation and around the world.

The Entomological Society of America is dedicated to serving the professional and scientific needs of entomologists and people in related disciplines. One subject matter Section around which ESA is organized is the Plant-Insect Ecosystems (P-IE) Section. The 2,600 ESA P-IE members are affiliated with educational institutions, health agencies, private industry, and government. ESA P-IE members are experts in insect interactions with plants encompassing such subspecialties as crop protection, IPM (in agriculture, horticulture, forests, and lawn and garden), pollination, and biological and microbial control of insect pests. They regularly disseminate original research and perspectives leading to new discoveries and applications, create new opportunities to stimulate new ideas and capitalize on members' diversity and varied perspectives, and expand the basic level of understanding about insects and related organisms through outreach to stakeholders.

The American Phytopathological Society is a non-profit, professional scientific organization representing nearly 5,000 scientists and practitioners of plant pathology dedicated to the study and control of plant disease, The American Phytopathological Society is the premier society dedicated to high-quality, innovative plant disease research and management. For more than a century, members of APS have been making and sharing significant breakthroughs, both for science and society. APS is driven by a distinctive community of scientists, whose energy and commitment ensure the global advancement of this critical science. APS members come from academia, government, industry, and private practice. The diversity of the members and science makes the society pertinent to a multitude of research areas, while the international involvement ensures that the latest innovations from around the world are available to all.

As societies that encompass basic and applied scientific disciplines, WSSA, ESA P-IE and APS commend EPA for its efforts to address spray drift through improved pesticide label language. We also appreciate the working relationships that our societies enjoy with the Agency and our partnership on a number of important educational efforts to manage the environmental and economic impacts of weed, insect and pathogen outbreaks in the United States. We are, however, very concerned with EPA's proposal in this draft notice 2009-X to add a general drift language statement to virtually all outdoor sprays or dusts. The proposed required statement would read "*Do not apply this product in a manner that results in spray [or dust] that could cause an adverse effect to people or any other non-target organism or site*". Similarly, for non-commercial (residential, home & garden) products, the wording would be "...*that could cause harm to people, pets, property, aquatic life, wildlife, or wild life habitat.*" Although this wording is an improvement over the past "*do not drift*" suggested in the dropped 2000-X drift notice, the proposed labeling raises its own real concerns as it expands spray application restrictions for registered products to essentially a "*no off-target residue*" requirement with out any apparent consideration for the benefits of pest management or to compound-specific toxicity as evaluated through science-based risk assessment.

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) states the U.S. Environmental Protection Agency (EPA or Agency) must ensure that a product will perform its intended function without causing any "*unreasonable adverse effects on the environment.*" before they register it for sale or use in the United States. To register or reregister a pesticide use, the FIFRA defines unreasonable adverse effects as "*any unreasonable risk to man or the environment, taking into account the economic, social, and environmental costs and benefits of the use of any pesticide...*". This new general drift language proposal goes well beyond EPA's mandate and seeks to regulate on the mere presence of a product without directly addressing the toxicity or risk of the individual pesticide.

The wording "*could cause*" is open to subjective interpretation and could attract frivolous complaints, leading to difficult, confusing and uneven drift enforcement decisions. Obvious and off-label drift occurrences that might not have readily observable adverse effects are already enforceable as application violations (residues, species decline, etc)

without the need for this very subjective wording, for example through the buffer zones as already required for some products. We request that the subjective “*could*” be removed. This language can lead to disrupted IPM crop management in critical fruit and vegetable production areas which are often near urban interfaces because of the frivolous litigation it invites.

The possible scope of “*could cause*” versus “*causes observable adverse effects*” would have a number of impacts on our society. Additional litigation directed at farmers and crop producers, would increase their insurance and production costs, negatively impacting the economic health of the agricultural production sector and more importantly, our fragile rural community economies. Limitations on crop production would also hurt the nation's ability to compete in global agricultural markets. Increased food and fiber costs would also create dietary harm to low-income and otherwise vulnerable populations, those that EPA spends considerable resources protecting.

Of great importance, the use of buffers between target and sensitive sites needs to be in the downwind direction sides only, otherwise a major loss of productive agriculture land will result. Suggested alternate wording might be “*Buffer is not required when sustained winds are away from the sensitive sites.*” USDA determined, with the previous EPA drift PR notice in 2000, that, if buffers were not made wind-directional, the economic loss would be on the order of \$1-2 billion dollars due to the large amount of irreplaceable acreage removed from production.

EPA proposes to add the general drift prohibition language to the Worker Protection Standard (WPS) box. It would be better if drift were addressed under the label Directions for Use as proposed for all non-agricultural and home owner products currently without WPS.

EPA’s proposes to add the WPS statement to the current WPS statement on spray and drift exposure on all commercial product labels that do not require this statement; that would include “*Do not apply this product in a way that will contact workers or other persons directly or through drift*”, plus the additional statement “*do not apply in a manner that...could cause an adverse effect to people or any other non-target organism or site*”. This directive violates and obscures the current risk assessments for low toxicity crop protection products that EPA has been clearly distinguished for the benefit of agriculture and society. This type of language should be added only to products having an identified toxicity risk per EPA registration procedures and should not include the subject “*could*”.

The Violation Decision Flowchart EPA proposed in the Draft Pesticide Drift Labeling Interpretation document (EPA-HQ-OPP-2009-0628-003) should not consider all drift contact with humans as violations, but instead should reflect actual risk assessment based on scientifically-generated mammalian toxicity data. While EPA attempts to support risk assessment in some of the examples given in the Pesticide Drift Label interpretation, the state courts will ultimately determine the interpretation, so EPA must clearly incorporate the critical use of toxicity risk assessment in the drift PR Notice so that all decisions have

a clear science base and are not defined merely by a hazard assessment without any consideration of magnitude of exposure.

EPA wording and grouping of human exposure with sensitive off-site concerns appears to ignore the trend for the development of highly effective pesticides having very low human toxicity. These beneficial, economically useful IPM tools for food and fiber production must be treated with the "*no unreasonable risk*" FIFRA standard that EPA has used successfully to mitigate risk while protecting the environment and humans, not with essentially what would be a "*zero human contact*" statement and near-zero residue/zero off-target exposure wording. The WPS statement was intended for worker and bystander protection at the application site, not for drift issues off site and out of the treatment area.

Product Specific Drift Statements and Appendix A

EPA has simplified and clarified the labeling instructions and the table format is a significant improvement. However, the table for the airblast/orchard use patterns does not address the key variable effects of canopy height and density which are known to have greater impact than wind speed; this issue should be addressed with additional, applicable information.

The addition of future Drift Reduction Technology (DRT) credits in a table is straightforward and logical approach. However, there is a need to support, publicize and develop educational outreach to promote DRTs. Efforts to work with USDA staff involved with DRT data development should be pursued and supported by EPA. It would be highly desirable if this could also be incorporated into NRCS programs such as EQIP. We feel that, if properly executed and made affordable, the DRT program has the potential to offer much value. In addition to nozzle type and formulation, EPA should consider hedge rows and vegetative canopy buffers as viable DRTs. Further, EPA should clearly indicate that hedge rows and vegetative canopy buffers specifically created and utilized for drift and conservation purposes on the application target site are not sensitive protected areas.

Drift Reduction Technologies (<http://www.epa.gov/etv/este.html>) and vetted Best Practices that qualify, or standards such as ASABE Best Management Practices for Ground Boom Sprayers, should be available on national websites and incorporated into national training and educational materials. EPA should strongly consider increased coordination with USDA, State Extension Services, and professional training and certification organizations

Additionally, any labeled buffer distances must generally be based on reasonable application scenarios, not absolute worst case application conditions. Also, buffer distance should indicate aquatic versus terrestrial site risk if there is a significant difference. It is critical to remember that the benefits lost to buffers that are worst case or inappropriate represent the needless dissipation of the Nation's productivity.

Comments on Draft Pesticide Drift Labeling Interpretation

EPA's definition of human adverse effect as "*Any negative physical impact, health symptom, or illness, regardless of whether it requires medical treatment or is temporary in nature or term*"; is too broad and disconnected from actual harm or scientifically proven impact. This language invites violations not clinically connected to pesticide exposure including psychosomatic complaints and symptoms such as headaches and negative thoughts that are only perceived to be caused by pesticide application

Example 8 (Airblast insecticide drift onto an empty schoolyard) should not constitute a violation based on REI interval without considering that the drift related residues will typically be only 1-2 % of the application rate, a safety factor of 50-100X. Residues alone cannot indicate violation without some use of science-based toxicity risk data for the product being considered. The proposed interpretation would unjustly penalize safer newer products that might have a 0-1 day REI.

Response to Specific Questions EPA asked in document EPA-HQ-OPP-2009-0628-004 [see pp16-31].

Key Non-registrant Questions:

1. Q: page 18 "*Should home and garden products etc. be included?*"
A: The wording for non-commercial home and garden product must not contain "*could cause*" as that user/market has no basis or training to make such judgments. A simple statement with regard to height and wind speed and direction is all that is appropriate for label requirements."
2. Q: page 18 "*The draft PR Notice describes pesticide drift as the physical movement of pesticide droplets or particles through the air from the target site to any non-target site, "during application or soon thereafter."* Please comment on the Agency's use of the phrase, "*or soon thereafter*", and whether it clearly covers spray and dust drift resulting from application during stable atmospheric conditions, such as a near-ground inversion. If not, what alternate wording would be more appropriate"
A: The phrase "soon thereafter" is undefined and has little utility. We suggest that the label language be restricted to "during the application". This phrase recognizes that drift is the result of an application and not re-deposition or the movement of soil particles containing residues, which may occur hours after an application and beyond the control of the applicator.
3. Q: page 26 "*Please comment on the portion of the general drift statement prohibiting drift that "could cause" adverse effects*"
A: We believe that the phrasing of general drift statement is overbroad and could prompt inappropriate enforcement actions. The quoted language could lead to overly aggressive federal or state enforcement based only on a subjective belief about an application's potential to cause harm even when the possibility of an adverse effect is remote. The wording "*could cause*" is open to subjective

interpretation and can be interpreted in so many ways, it not only invites potentially frivolous litigation, it may actually encourage it.

We also consider the following statement by the Agency problematic: *“Human exposure cases do not have to show contact or adverse effects in order to constitute a violation. Case file evidence that humans were directly exposed to a product is sufficient grounds for pursuing a violation.”* This statement could be read to mean that any human contact with pesticide drift constitutes a violation even for a pesticide posing no foreseeable human health risk. Enforcement actions should be reserved for only those pesticides that have a known potential to cause an adverse health effects in humans, as demonstrated in science-based risk assessment, before drift could be considered a violation of the label.

4. Q: page 26 *“Please comment on EPA’s proposed approach [for interpreting “harm” and adverse effects”] in the context of the general drift statement.”*

A: EPA should avoid using terminology that is so broad that it could be misread as criminalizing lawful behavior. In this regard, EPA states that *“exposure of humans... to a pesticide either directly (at the application site) or from contact with off-target drift is potentially dangerous”*. However inadvertent human exposure to a pesticide with no known potential to cause adverse effects in humans should not constitute a label violation. Accordingly, EPA should make clear that inadvertent human exposure to a pesticide from spray drift constitutes a label violation only when that pesticide is known to cause adverse human health effects.

5. Q: page 28 *“Please comment on how the Agency should identify or describe sensitive sites, and under what circumstances EPA should include additional restrictions in labeling to protect sensitive sites.”*

A: EPA should not describe a sensitive site as an area that is *“particularly affected by a pesticide”* because the quoted phrase is too subjective. For example, someone might believe that pesticide should not be permitted to drift onto a historic site or a religious site even if such drift has no propensity to cause an adverse effect by any objective measure. We urge EPA to limit sensitive sites to places where a sensitive species may be located during, or reasonably soon after, an application. We also encourage the use of Best Practices for Endangered Species sites and consideration of website-based information for local customized instructions and recommendation options.

6. Q: page 31 *What is the right balance among the tools available to the Agency to motivate pesticide applicators to use all reasonable measures to reduce drift: product labeling, incentives to use drift-reducing technologies, self-implemented educational materials on best management practices, certification training, or other?. Why?”*

A: All are needed; tying DRTs in with the USDA NRCS EQIP program, including weather instrumentation, etc, web-based training, encouraging states to include buffer strip plantings in new developments bordering agricultural land and riparian areas. EPA should request added support from USDA-ARS, NIFA and NRCS.

7. Q: page 31 *“EPA has limited spray drift labeling statements to those the Agency regards as enforceable. What are the pros and cons of including advisory statements on labels that may provide useful information to users about how to prevent or minimize drift? Would the pros and cons of advisory statements differ for agricultural or commercially-applied products, versus products intended for small-area, residential use by the general public?”*

A: Label Advisory statements provide useful and product-specific information that assist the applicator in making wise decisions. If these are omitted, then the only purpose of the label is to enforce and not to provide practical information on product management. While that may serve EPA’s needs, this does not assist the applicator or provide the most useful and up-to-date information. The need for product-specific information is equally useful in large and small applications.

WSSA, ESA P-IE and APS sincerely hope that the Agency will accept these comments and make these changes to the proposed drift label language. America's farmers have become so efficient, that just a few percent of the population can feed the entire country and much of the world. One of the downsides of this efficiency is that consumers have forgotten where our food comes from and what it takes to get it to market. It is the unique and critical responsibility of the Agency to insure that growers realize the benefits of pest management products by allowing them to make the best use of the tools available, for example, through the use of wind-directional buffers where warranted. We sincerely feel that the Agency’s best approach to spray drift management is by emphasizing education and stewardship, not by creating conditions that remove land from agricultural production or by creating barriers through hazard-based assessments where no actual risk exists.

We look forward to working with the Agency to assist in grower education and the further development of Drift Technology Reduction systems, including credit for hedge rows and vegetative canopy buffers, to meet the Nation’s agricultural goals.

Sincerely,

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