

2 August 2016

Environmental Protection Agency  
1200 Pennsylvania Ave NW  
Washington, DC 20460-0001

Re: EPA-HQ-OPP-2016-0242, Draft Guidance: Pesticides; Pesticide Registrants on Pesticide Resistance Management Labeling and EPA-HQ-OPP-2016-0226, Draft Guidance: Pesticides; Pesticide Registrants on Herbicide Resistance Management Label, Education, Training, and Stewardship.

This comment is being provided by the Western Integrated Pest Management Center in response to dockets EPA-HQ-OPP-2016-0242 (hereafter referred to as PRN 2016-X) and EPA-HQ-OPP-2016-0226 (hereafter referred to as PRN 2016-XX) which provide guidance for pesticide registrants on pesticide resistance management labeling. The Western IPM Center is one of four regional centers funded by the USDA National Institute of Food and Agriculture. We represent thirteen Western states and four Pacific Island territories. This comment is a summation of input gathered from experts in weed science, entomology, and plant pathology in our region.

Integrated pest management (IPM) is a science-based, ecosystem level approach to pest management that identifies and reduces risks from pests and pest-management practices using the most economical and environmentally responsible means possible. These comments are presented within the context of integrated pest management.

#### **Adding resistance language to the label**

While we are supportive of resistance management, we are concerned about adding extensive resistance management language to the label because of the current length of labels. Therefore, additions to the label should be as concise and usable as possible.

The draft guidance documents use the terms “should” instead of “must” when referencing appropriate resistance-management strategies. In our experience, the use of the term “should” suggests that resistance-management use is optional.

#### **Proposed herbicide resistance labeling**

The Western IPM Center and regional scientists provide the following input into the proposed labeling requirements for herbicide resistance.

The Western IPM Center suggests the use of the term *integrated pest management* instead of *integrated weed management* in the proposed herbicide resistance labeling guidance (pages 8 and 9 of PRN 2016-X). Weeds are pests and the principles of integrated pest management are applied to weeds in similar ways to other pests.

In their comment submitted in response to EPA-HQ-OPP-2016-0187-0012 on May 31, the Weed Science Society of America proposed that herbicides be placed in the same category instead of differentiating

them based on their mode of action and the number of weed species with evolved resistance as had been proposed. Placing all herbicides in the same category is simpler for registrants and users, but more importantly, it fosters good resistance management for all herbicides. Resistance management of all pesticides is a critical component of integrated pest management suppression efforts. In PRN 2016-X, this confusing language has been removed and we are supportive of that. However, in PRN 2016-XX, the categories are still used and like, WSSA, we are supportive of placing all herbicides in the same category.

The proposed draft guidance, PRN 2016-X, has removed the requirement for eleven elements on the label. We are supportive of this removal since many of those elements were potentially confusing to applicators and should not replace a good integrated pest management and resistance management plan. The PRN 2016-XX still includes these elements. Our comments on those elements are:

- *Element 2. The seasonal and annual maximum number of applications and amounts for each crop.* This could be potentially confusing. Instead of listing an overall guideline, it would be more important to require users to follow instructions for their specific circumstances.
- *Element 3. Inclusion of Best Management Practices (BMPs) for herbicide-resistance management, as appropriate, or general language from PRN 2016-X.* This should be included on the label and should include non-herbicide control options.
- *Element 4. Statement that scouting should be done both before and after a pesticide application (as described in PRN 2016-X).* Without some specific context to what the user is scouting for, this instruction is difficult to follow.
- *Element 7. Separate label table of confirmed resistant weed species with the effective or recommended rates specifically for these weeds.* First, this element is contradictory and confusing. If a weed is resistant, then it doesn't make sense to have a list of recommended rates as this sends a message to applicators that if a herbicide doesn't work, you can just spray more. Second, there should be clarification on what it takes to confirm that there is resistance. Who would be responsible for confirming resistance? What procedure would they follow? Is the confirmation of resistant weeds only for the weeds listed on the label? Assuming resistance is confirmed, would confirmed resistance in one geographic zone lead to labeling of a weed to be resistant in another geographic zone? Geographically isolated weed populations may not have the same rate of response to the same herbicide.
- *Element 8. Registrant reports new cases of likely and confirmed resistance to EPA and users yearly.* This should not be on the label. This is an instruction for the registrant, not the user.
- *Element 9. Educational and training materials for users.* It will be very challenging to develop management plans and action plans that are locally specific while also being broadly applicable. This is very challenging in the Western United States because of our wide ranging environments and agronomic and specialty crops. This also adds to the length of the label.
- *Element 10. For formulated products containing multiple herbicides that are in different MOA groups, for each herbicide list the weeds controlled and their minimum recommended rate on the label.* It would be difficult to get a comprehensive list for many weeds in many environments.

### **Proposed fungicide and bactericide language**

Growers and pest control specialists are accustomed to using FRAC identifier codes that are numeric only. These are more commonly used than the combined letter/number codes. Requiring the letter/number codes on the label will be confusing to growers.

Language on bactericides should not be combined with fungicide label guidance. Resistance management and terminology surrounding bactericides are not similar to fungicides. For example, there isn't an equivalent to FRAC codes to differentiate bactericides. We recommend that different labeling language be developed for bactericide labels to include the prudent use of antibiotics.


The language on tank mixes on page 10 (*Use tank mixtures with fungicide/bactericides from a different group that are equally effective on the target pest when such use is permitted.*) limits the inclusion of biopesticides in a tank mix. Biopesticides are not always “equally effective” but they are part of a sound integrated pest management plan.

One category within the FRAC code list is for fungicides that have multi-site contact activity. It is not necessary to rotate these chemistries from a resistance management viewpoint.

Finally, the Western IPM Center suggests the use of the term *integrated pest management* instead of *integrated disease management* in the proposed fungicide and bactericide resistance labeling guidance (page 10). Diseases are pests and the principles of integrated pest management are applied to diseases in similar ways to other pests.

Please contact me if further information is needed.

Sincerely,

A handwritten signature in blue ink that reads "Amanda Crump". The signature is written in a cursive, flowing style.

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