



Response to EPA Proposed Interim Decision for Oxyfluorfen

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Arizona Pest Management Center, University of Arizona

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Re: Oxyfluorfen, Comments on EPA Proposed Interim Decision
Docket ID: EPA-HQ-OPP-2014-0778

To Whom It May Concern:

The Arizona Pest Management Center is host to the University of Arizona's expert IPM scientists including Ph.D. entomologists, weed scientists and plant pathologists with expertise in the strategic tactical use of pesticides within IPM programs that protect economic, environmental and human health interests of stakeholders and the society at large. In coordination with the Western Integrated Pest Management Center, we contribute to federal comments on issues of pest management importance to stakeholders throughout the desert southwest including Arizona, New Mexico, Nevada, Colorado and the southeast desert regions of California.

At this time, we wish to respond to the Agency's Proposed Interim Decision for the herbicide oxyfluorfen, EPA Docket number EPA-HQ-OPP-2014-0778, on behalf of Arizona agricultural stakeholders. Our comments combine stakeholder input received from University of Arizona Extension Specialists, licensed pest management professionals from Arizona, and reported pesticide use data from the Arizona Pest Management Center Pesticide Use Database.

We wish to incorporate by reference comments submitted by the Arizona Farm Bureau Federation on November 29, 2019, in response to draft risk assessments for oxyfluorfen, Docket ID# EPA-HQ-OPP-2014-0778-0032 (Smallhouse 2019).

Oxyfluorfen use in Arizona Agriculture

Oxyfluorfen is a contact herbicide that provides pre and early postemergence protection against broadleaf weeds in a number of crops. Based on data from the Arizona Pest Management Center (APMC) Pesticide Use database, oxyfluorfen is primarily used on cole crops (cauliflower, broccoli, cabbage, including seed), cotton, onions (including seed), garlic and beans. A small number of uses are also reported on artichoke (Fournier et al. 2017). Oxyfluorfen is also known to be an important herbicide for weed control in pecan and pistachio orchards.

Cole Crops

According to USDA National Agricultural Statistics Service (USDA-NASS 2021), in 2020, Arizona produced a combined 20,600 acres of broccoli, cauliflower and cabbage valued at over \$204 million. We estimate that about 30% to 40% of broccoli, cauliflower and cabbage are treated with oxyfluorfen, which provides more effective weed control than many alternatives.

EPA's Proposed Interim Decision does not include any rate changes, use cancelations or restrictions impacting cole crops, onions or garlic. However, see please discussion below regarding proposed Vegetative Filter Strips.

Pecans and Pistachios

In 2020, Arizona produced pecans on 21,000 acres valued at over \$50 million (USDA-NASS 2021). Pistachio acres are currently estimated between 15,000 and 20,000 acres. According to Dr. William McCloskey, University of Arizona Extension Weed Scientist, oxyfluorfen is a very important herbicide in Arizona tree nut orchards. It is the primary active ingredient in Pindar GT, a pre-mix herbicide which also contains penoxsulam. Pindar GT is used by some of our largest growers on at least 10,000 acres of pecans annually. Pindar GT is effective at low rates, 3 pts./ac. (1.474 lbs./ac. oxyfluorfen), and controls major weeds that impact pecan yields. Applications are made by ground after trees are well established. The spray is applied at the base of the trees (Smallhouse 2019). Similar practices are used in pistachio orchards.

Based on information from Arizona Pest Control Advisors (PCAs) working in both pecans and pistachios, oxyfluorfen (in Pindar GT) is a very effective herbicide, and part of their standard weed control practices. **None of EPA's proposed application method restrictions impacting orchard crops appear to be problematic, based on current practices in these crops.** Banded treatments are used (no broadcast applications) in pecan and pistachio orchards. Banding is effective and economical. Coverage represents 25% to 50% of the orchard floor, depending on tree spacing, 25% to 33% being typical. There are benefits to leaving some vegetative cover between trees: it acts as a cover crop, cools the soil and protects young trees from damage during dust storms. Backpack sprayers are not used by commercial grower operations. Although a few growers sometimes chemigate using sprinklers, these applications are less effective than banded sprays, due to inconsistent coverage.

Cotton

Arizona produced 123,000 acres of upland cotton in 2020 with a value of over \$142 million, inclusive of cottonseed (USDA-NASS 2021). In recent years, oxyfluorfen use is reported on a small percentage of cotton acres statewide (less than 1%, a conservative estimate of use, because grower-applied herbicides do not require reporting). PCAs who report using oxyfluorfen in cotton indicate that a single treatment is used annually. **This is consistent with EPA's proposed reduction of maximum annual sprays in cotton from two down to one.**

Beans

Several kinds of beans are grown in Arizona, including garbanzo beans, pinto beans, and various other dry beans. Growers report inconsistent use of this herbicide on beans (not every year), but some years hundreds of acres are reportedly treated (Fournier et al. 2017). Again, this is a conservative estimate of use. Based on input from PCAs, and from a field manager who works

with a large bean processor in Arizona, one to two applications of oxyfluorfen are used, when needed. **This use pattern is consistent with EPA’s proposed reduction of maximum annual sprays in beans from six down to two.**

Vineyard Grapes

Economic activity directly associated with wine grape production, winemaking and wine sales in Arizona in 2019 was \$72.7 million (Bikel et al). Statewide production in 2017 was estimated at 1,500 acres. As of 2019, there were 125 bonded wine producers in the state.

A pest control advisor who manages pests on several vineyards for the Arizona wine industry reviewed the EPA’s proposed restrictions to application methods that could impact wine producers. Similar to orchard applications described above, broadcast applications are not used; banded application are already in place. Chemigations are inefficient, and generally are not used. Backpack sprayers and handguns are not recommended methods for application. **Current practices are consistent with EPA’s proposed changes.**

Vegetative Filter Strips

Based on a review of the language from EPA defining the purpose of the vegetative filter strips (VFS) and the rationale for existing exceptions, it does not seem like this requirement should apply to growers in Arizona for several reasons. The Proposed Interim Decision states (p.38):

“The exception [to the VFS requirement] is being made for the Pacific Coast states [Washington, Oregon, and California] because the rainfall which causes runoff mostly occurs during the winter and out of the growing season in these states. In addition, most agriculture in these states is irrigated and vegetated filter strips are not easily compatible with irrigated agriculture, especially flood and furrow irrigated systems. Many crops in these states are grown under contracts requiring a ‘clean’ (unvegetated) field border to keep contamination associated with animals (Escherichia coli) away from the crop.”

Arizona agriculture has more in common with California, Oregon and Washington than it does with much of the country.

- (1) Very little of Arizona’s agricultural land is found near water bodies as described in EPA’s proposed language (“such as, but not limited to, lakes; reservoirs; rivers; streams; marshes or natural ponds; estuaries; and commercial fish farm ponds”).
- (2) There is a premium on water in desert agriculture. 100% of our agriculture is irrigated, and does not rely on rainfall. Nearly all agricultural fields are laser-leveled, to conserve water on the field and to reduce runoff. Because of laser-levelling, there is no down-gradient associated with fields, in the majority of cases.
- (3) Arizona receives less rainfall than states with exceptions. According to NOAA National Climate Center data, from 1971 to 2000, average statewide rainfall in Arizona was 13.6 inches, compared to 22.2, 27.4 and 32.6 for California, Oregon and Washington, respectively (Current Results 2021). Yuma, the center for vegetable production in Arizona, receives an average of only 3.1 inches annual rainfall (worldclimate.com 2021).
- (4) Similar to the excepted states, many of the crops grown in Arizona are under contracts which require “clean” field borders to minimize product contamination.

However, unlike these other Western states, many areas of Arizona have year-round agricultural production. There is no “off season” for agriculture. Nonetheless, our extremely modest rainfall and careful water conservation practices, combined with the rarity of water bodies in close proximity to agricultural fields should make Arizona a good candidate for an exception to the VFS requirement. **We request that EPA consider the characteristics of Arizona agriculture to determine whether an exception to the VFS requirement is appropriate for Arizona growers.**

Thank you for the opportunity to comment. Please contact me if you have any questions.



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