



Jan 27, 2021



## Pesticide Registration Review: Chlorpyrifos Comments Due **Feb 5, 2021**

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COLLEGE OF AGRICULTURE  
AND LIFE SCIENCES  
COOPERATIVE EXTENSION  
Arizona Pest Management Center

Good Morning everyone.

EPA is currently conducting registration review, including significant proposed changes for Chlorpyrifos labels.

Some common products: Lorsban, Nufos, Govern, Lock-on

Note the due date for comments, next Friday. **Note: Deadline was extended to March 7.**

## **What do you need to know?**

- **EPA seeks to mitigate human health concerns while considering benefits**
- **AZ retains a label for alfalfa, our highest use**
- **Potential AZ cancelations on selected uses, but EPA will consider further comment:**
  - **Corn**
  - **Pecans**
  - **Citrus(?)**
  - **Cotton, Wheat, sugar beets**
- **Other use prohibitions by crop/formulation**
- **Additional PPE, including respirators for some uses; extended REIs being considered**

I've put the most important points right up front.

Bottom line here is that EPA is open considering additional comments and the needs of growers on a state by state, crop by crop basis. I need to know if there are critical uses in AZ that we need to comment on. And I will need specifics from the community to help me respond to EPA. Or you may wish to submit comments yourself.

## Office of Pesticide Programs Update



### EPA Proposes New Safety Measures for Chlorpyrifos

- **2016 - 17:** Proposal to revoke tolerances
- **9/22/20:** 3rd Revised Human Health Risk Assessment (RA), Ecological RA
- **12/6/20:** Proposed Interim Decision
  - **Due Date: Feb 5, 2021**

See previous APMC comments:

<https://acis.cals.arizona.edu/ipm-assessment/epa-comments>

EPA has been looking hard at Chlorpyrifos for a while, and proposed eliminating all tolerances back in 2015. That decision was later reversed.

The APMC has submitted 4 previous comments to EPA on our uses of chlorpyrifos in alfalfa, cole crops, sorghum, corn, cotton and pecans to control various pests.

(APMC comments highlighted the use of chlorpyrifos to control multiple pests in alfalfa, lepidopteran pests and bagrada bug in cole crops, sugarcane aphid in sorghum, and for lepidopteran control in corn some years. Also, black pea aphid in pecans in Arizona and New Mexico.)



## Risks of Chlorpyrifos (1)

- **Adverse health effects in animals and humans related to **AChE inhibition**, and potential for **neurodevelopmental effects**.**
- **Potential for increased **sensitivity and susceptibility of children** to neurodevelopmental effects**
- **Uncertainties and evolving science around understanding these effects led EPA to assess risk with and without FQPA 10x safety factor**

Why is this happening? Chlorpyrifos is an old OP insecticide that has serious human health concerns associated with it. This includes **Acetylcholinesterase** inhibition and neurodevelopmental effects for children, developing fetuses and animals.

There are indications that children are more sensitive and susceptible to neurodevelopmental effects.

There are uncertainties surrounding the science and under FQPA, EPA implements a 10x safety factor for children.

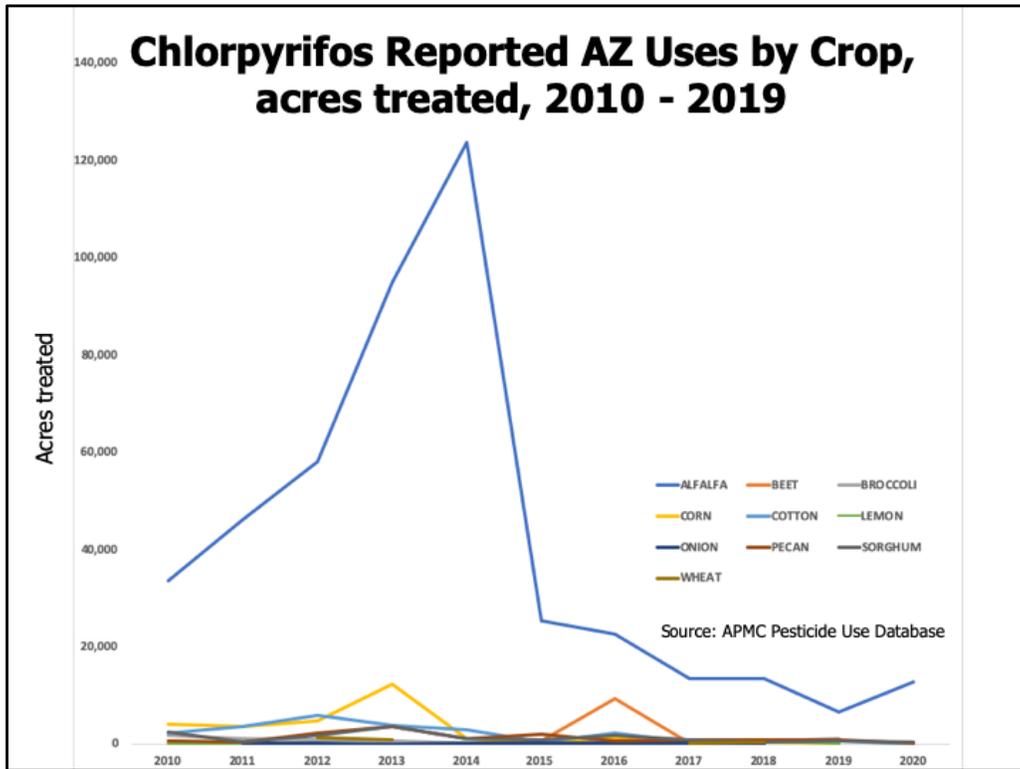
Because of some scientific uncertainty, and because certain studies are pending, EPA ran some of its risk assessments with and without the 10x safety factor.



## Risks of Chlorpyrifos (2)

- **Dietary risks** driven by drinking water exposure based on current labeled uses.
- **Occupational handler & post-application** exposure risks of concern for many uses
- **With or without 10x Safety Factors**
- **Ecological risks** of concern for mammals, birds, fish and invertebrates
- **EPA proposes label changes** to mitigate risks

The most significant risks are associated with exposures through drinking water (including aggregate dietary risk) and occupational health exposures. EPA proposes [label changes](#) to mitigate risks.



This figure shows Arizona reported use of chlorpyrifos, 2010 – 2019. 2020 data are incomplete, but I have included these points mainly to show that there is already an uptick in used for alfalfa in 2020, which may rise when data are all in. Obviously, Alfalfa is the large gorilla here. That isn't to say that some of these other crop uses aren't important. Many of these are small acre crops. I have included only crops with uses reported over a range of years. We do see scattered other uses.

## **Proposed Interim Decision**

- **Use cancellations**
- **PPE**
- **Use Prohibitions / Application restrictions**
- **Re-Entry Intervals**
- **Pesticide Resistance Management**
- **Spray Drift Management**
- **Updated Water-Soluble Packaging language**

EPA is proposing a large number of label changes, which include all these categories. I don't have enough time to cover all the details, but please contact if you have questions or want to provide feedback.

I will focus mainly on the potential use cancellations that could affect us in AZ.

## PID: Cancellations - 10x

**Table 10: Agricultural Uses Proposed for Retention in Chlorpyrifos Labels with an FQPA Safety Factor of 10X**

Use Site	State for retention at the 10X <sup>1</sup>
Alfalfa	AZ, CO, IA, ID, IL, KS, MI, MN, MO, MT, ND, NE, NM, NV, OK, OR, SD, TX, UT, WA, WI, WY
Apple	AL, DC, DE, GA, ID, IN, KY, MD, MI, NJ, NY, OH, OR, PA, TN, VA, VT, WA, WV
Asparagus	MI
Cherry (tart)	MI
Citrus	AL, FL, GA, NC, SC, TX
Cotton	AL, FL, GA, NC, SC, VA
Peach	AL, DC, DE, FL, GA, MD, MI, NC, NJ, NY, OH, PA, SC, TX, VA, VT, WV
Soybean	AL, CO, FL, GA, IA, IL, IN, KS, KY, MN, MO, MT, NC, ND, NE, NM, OH, OK, PA, SC, SD, TN, TX, VA, WI, WV, WY
Strawberry	OR
Sugar beet	IA, ID, IL, MI, MN, ND, OR, WA, WI
Wheat (spring)	CO, KS, MO, MT, ND, NE, SD, WY
Wheat (winter)	CO, IA, KS, MN, MO, MT, ND, NE, OK, SD, TX, WY

<sup>1</sup>Only specific uses in specific 2-digit HUCs were assessed as described in the 2020 drinking water assessment. These specific uses are based on usage data and may not reflect maximum label rates on current labels.

This is Table 10 from the PID.

EPA is proposing to limit applications to **selected uses** in certain regions of the U.S. where estimated drinking water concentrations of chlorpyrifos are lower than the drinking water level of concern. **Table 10 provides a list of the high-benefit agricultural uses that will not pose potential risks of concern with an FQPA safety factor of 10X, and may be considered for retention.**

The only listed crop here noted for retention is Arizona is Alfalfa.

if EPA retains the 10X safety factor analyses, chlorpyrifos may no longer be labeled in Arizona for use in cotton, citrus or wheat.

However, **EPA will consider registrant and stakeholder input on the subset of crops and regions, and may conduct further analyses to determine whether any other limited uses may be retained.**

## PID: Use Cancellations - 1x

Table 11: Regional Restrictions for Corn, Tart Cherries, Citrus, Pecan, and Peach with an FQPA Safety Factor of 1X	
Use Site	State for retention at the 1X <sup>1</sup>
→ Corn	AL, AR, FL, GA, IA, IL, IN, KS, KY, LA, MN, MO, MS, MT, NC, ND, NE, NY, OH, OK, PA, SC, SD, VA, VA, WI, WV, WY
Cherries (tart) 3 lb a.i./A	WA, OR, ID, MT (Deer Lodge, Flathead, Granite, Lake, Lincoln, Mineral, Missoula, Powell, Ravalli, Sanders, and Silver Bow counties)
Cherries (tart) 2 lb a.i./A	MI, WA, OR, ID, MT (Deer Lodge, Flathead, Granite, Lake, Lincoln, Mineral, Missoula, Powell, Ravalli, Sanders, and Silver Bow counties)
→ Citrus	AL, FL, GA, NC, SC, TX
→ Pecan	AL, FL, GA, NC, NM, OK, SC, TX
Peach	AL, DC, DE, FL, GA, MD, MI, NC, NJ, NY, OH, PA, SC, TX, VA, VT, WV
<sup>1</sup> Only specific uses in specific states listed above were assessed as described in the 2020 supplemental document. These specific uses were assessed based on actual application rates from reported usage data and may not reflect maximum label rates on current labels. If usage data were not available no additional refinement was possible, therefore, the state would not be listed.	

Peppers have drinking water concentrations above level of concern

If EPA decides not to use the 10x safety factor, a smaller number of crops in AZ may be affected. But note the addition of Pecans and Corn here.

## **PID: PPE Requirements**

- **Additional PPE requirements for all labeled uses**
- **Clothing requirements & engineering controls**
- **Respirator requirement for a broad range of formulations and uses fit test, training and medical evaluation for pesticides covered by the Worker Protection Standard (WPS)**
- **Closed pesticide delivery system for mixing and loading for several uses**
- **Enclosed cab for airblast applications**

Extensive additional PPE requirements are being proposed to mitigate risk. Includes a respirator requirement for some uses.

## **PID: 10x Use Prohibitions, Application Method Restrictions**

- **Ground Boom Applications**
  - **Liquid/SC:** **Corn** (pre-plant and post-emergence), **cotton** (except MS), tree nut orchard floors (**pecans**, almonds, walnuts), ornamental lawns and turf, and sod farms
  - **Dry flowable (DF) /water-soluble granule (WSG) in WSP:** Tree nut orchard floors (**pecans**, almonds, walnuts), **corn**, sorghum grain, soybean, rutabaga, and turnip
  - **Wettable powder in WSP:** Ornamental lawns and turf, sod farms (turf), ornamental woody shrubs and vines (pre-transplant)

Specific use prohibitions for certain application method/formulation combinations on specific crops. This is with the 10x safety factor in place.

## **PID: 1x Use Prohibitions, Application Method Restrictions**

- **Airblast Applications**
  - **Arizona Citrus: Reduce rate to 4 lbs a.i./acre**
- **Tractor-Drawn Spreader**
  - **Prohibition on corn and soybean**
- **Seed Treatments**
  - **Liquid formulation on beans, corn, cotton**
  - **Microencapsulated formulation on beans**
  - **Wettable powder in WSP on beans and corn**
- **Hand-held Application Methods**
  - **Urban and industrial uses, mainly**
- **Microencapsulated formulations**
  - **Ornamentals in nurseries & greenhouses**

The listed prohibitions are at the 1x safety factor. Also not the proposed rate reduction on Citrus, specific to Arizona. Seems contradictory because AZ was not on the earlier list to retain uses in citrus.

## **PID: Re-Entry Intervals**

- **EPA is still determining the most appropriate studies to inform decisions on REIs**
- **Proposed REIs for uses with identified risks of concern may extend over one week**
- **At the 1X level, approximately 10 crop groups with proposed REIs extending from 2 to 5 days**
- **Appendix D2 of PID identifies risk levels for a range of REIs by crop**

Re-entry intervals over a week are possible on some crops. 10 crop groups with REIs ranging from 2 to 5 days. If you are curious about a specific crop, ranges of re-entry times with associated levels of risk are listed in Appendix D2 of the Proposed Interim Decision.

## **Proposed Interim Decision**

- **Use cancellations**
- **PPE**
- **Use Prohibitions / Application restrictions**
- **Re-Entry Intervals**
- **Pesticide Resistance Management**
- **Spray Drift Management**
- **Updated Water-Soluble Packaging language**

In addition to the proposed changes I went over, there are these additional more minor label changes. The spray drift management recommendations are in line with what we have been seeing on other labels.

# Stay Tuned!

## Toxic Pesticide Faces New Scrutiny From Biden Administration

January 20, 2021



President Biden's initial wave of planned executive actions includes an order to reexamine one controversial, but widely used, pesticide called chlorpyrifos. The Trump administration had [stepped in](#) to keep the chemical on the market after Obama-era officials tried to ban it.

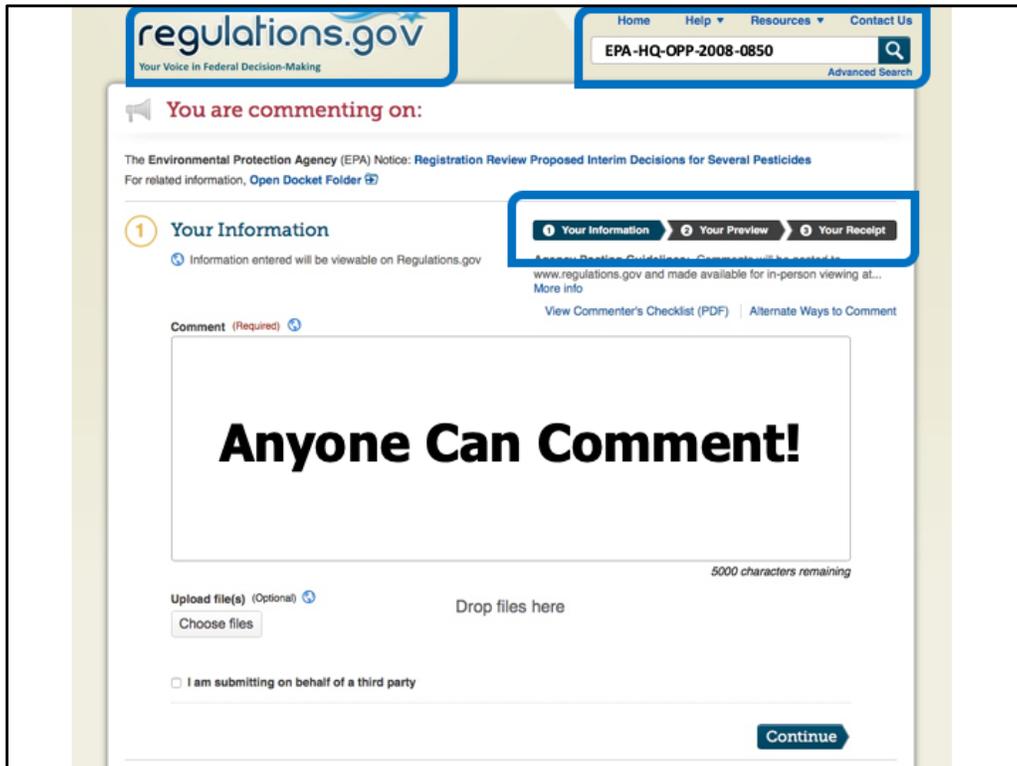
It's just one in a long list of science-related Trump administration actions that the incoming Biden team will now revisit. In a statement, Biden promised to take a



Pesticide warning sign in an orange grove. This sign.

Source: NPR website

Some of this could change based on recent actions by the new administration. They are reevaluating environmental and human health related decisions of the former administration, including the decision to reverse the plan to eliminate all tolerances.



Any interested citizen can provide comments to EPA during an open comment period. It is a relatively simple online process, on the Regulations.gov website. A section of our website provides instructions on how to develop effective comments and how to submit them online.

## What do I need to know?

- **key crop uses, situations, where chlorpyrifos is critical to retain in AZ (no viable alternatives)**
  - Corn
  - Pecans
  - Citrus (retention, rate change)
  - Cotton, Wheat, Sugar Beets
  - Peppers
- **Specific target pest, formulation, rate, application method**
- **What REIs will work? (Appendix 2D in PID)**
- *Please contact me by next week Weds to discuss your concerns!*
  - **AI: 520-705-9903**

I, meaning AI Fournier.

If anything I've shared today concerns you, I'd like to hear from you. The APMC will submit comments on behalf of our Ag community, as long as there is interest in doing so.

The kind of info I need is, why is it important in this crop? What it is doing for you that a safer insecticide can't do? Target pest, and specific info on the formulation, rate and application methods used. Also, what REIs are reasonable for growers in the crop you are commenting on.

Please call me if you have any concerns or would like to share your views and experience.



## **This Activity is Important!**

- **Comments make a difference for Arizona agriculture!**
- **Help us proactively promote your interests while protecting people and the environment**
- **Join my email list to get updates on EPA registration reviews**



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Please join my email list if you want to receive email updates related to EPA pesticide registration reviews.

## **Other Pending Comment Periods**

- **Draft Biological Evaluations for **Atrazine**, Simazine and Propazine**
  - **Deadline Extended: **Due 2/19/21****

Another comment opportunity coming up later in Feb for Atrazine.



## Thank You!



- **Pest Control advisors**
- **Specialty Crop Block Grant program**
- **Arizona Farm Bureau**
- **Peter Ellsworth**
- **Wayne Dixon**
- **Alexa Brown**

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