



Public Roundtable Discussions: 5-year Action Plan to respond to the cancellation of chlorpyrifos in California

Background

About the cancellation:

In August 2019 the California Department of Pesticide Regulation (DPR) announced that it had begun the process to cancel chlorpyrifos' registration for products with detrimental health effects.¹ In October 2019 the California Environmental Protection Agency (CalEPA) announced that sales of chlorpyrifos products in California would end in February 2020², and that virtually all possession and use of chlorpyrifos products will be banned after December 31, 2020.³

About the Work Group:

DPR and the California Department of Food and Agriculture (CDFA) established an Alternatives to Chlorpyrifos Work Group (Work Group) simultaneously with the announcement of the cancellation process.⁴

The Work Group includes members with a range of expertise, and will work from August 2019 through April 2020.

During this time the Work Group will develop a five-year action plan to support transitions to agricultural practices that do not include chlorpyrifos. The action plan will include short, medium, and long-term recommendations to support a thriving agricultural system in California.

About the scope:

The scope of the Work Group and the action plan is to identify alternatives to chlorpyrifos specifically, as well as to explore opportunities to expand California's long-term efforts to develop and adopt lower-risk pest management approaches.

¹ CDPR and CDFA press release announcing Alternatives to Chlorpyrifos Work Group:
<https://www.cdpr.ca.gov/docs/pressrls/2019/081419.htm>

² CalEPA and CDPR press release on end to chlorpyrifos use and sales in 2020: <https://calepa.ca.gov/2019/10/09/press-release-agreement-reached-to-end-sale-of-chlorpyrifos-in-ca-by-feb-2020/>

³ Specific use and sale conditions for chlorpyrifos products are available at:
https://www.cdpr.ca.gov/docs/chlorpyrifos/pdf/general_notice_append_o.pdf

⁴ Ag Innovations is a neutral nonprofit organization that is acting as a facilitator of the Work Group.

Therefore, this draft plan and public roundtable discussions are not focused on the pros and cons of the cancellation of chlorpyrifos, the science behind the cancellation, or aspects of chlorpyrifos use that are not addressed by the cancellation.⁵

About the public roundtable discussions:

Three sessions will be held in January 2020 to invite comments on a draft outline of the 5-year action plan.

About the draft outline:

This draft outline for an action plan is based on the Work Group's discussions from August-December 2019. For most sections, only the introductory paragraph and titles of recommendations are included. The narrative text and content of all lists are still in development.

After the public roundtable discussions, the Work Group will discuss the comments heard and continue to develop the plan until its completion (anticipated April 2020).

⁵ Such as granular application of chlorpyrifos

Draft Outline: 5-year Action Plan to respond to the cancellation of chlorpyrifos in California

1. Currently available alternatives to chlorpyrifos

One of the most important tasks of the Chlorpyrifos Alternatives Work Group is to help farmers adapt to new pest management approaches that do not use chlorpyrifos. To identify crops that would be most affected by the cancellation, the group first explored where chlorpyrifos has been used in recent years.

The group also reviewed where chlorpyrifos has been recommended as part of the University of California's (UC's) pest management guidelines. Chlorpyrifos was removed from many UC pest management guidelines in 2018 to align with the new restrictions for the use of chlorpyrifos in California. The group reviewed previous versions of these pest management guidelines to identify the cases where chlorpyrifos has been an important component of an integrated pest management program up until the recent changes in regulations. Review of the pest management guidelines identified readily-available alternatives to address many crop-pest combinations that have been treated with chlorpyrifos.

List 1: Uses of chlorpyrifos and known, readily-available alternatives

The work group agreed that the key uses of chlorpyrifos where alternatives are needed would be for the uses identified in the November 2018 recommended permit conditions issued by DPR.

The lists includes immediately available alternatives to chlorpyrifos for these crop/pest combinations. These alternatives are sourced from the UC pest management guidelines (as of December 2019).

[Section 6](#) of this document discusses research priorities to respond to the cancellation of chlorpyrifos. This list of crops and pests feeds into that set of research priorities.

(Note: content of lists are not included in this draft outline)

List 2: Additional significant uses of chlorpyrifos where alternatives will be needed

This list reflects additional crops where identification, development and use of alternatives will be a priority.

To develop this list, the group identified crops where chlorpyrifos was used in recent years (2013-2017), but there are no UC pest management guidelines available for those crops.

Of those cases, crops with the highest rate of use (either number of acres treated, or pounds of chlorpyrifos per acre used) are:

- Guava (subtropical and tropical fruit)
- Peas, general
- Sorghum
- Sunflower, general
- Sweet potato

For these crops, UC pest management guidelines are not available, so the Work Group has not identified immediate alternatives. Additional expertise may be needed to identify the pest pressures associated with these crops and research that would be needed to support growers of these crops to respond to the cancellation of chlorpyrifos.

List 3: Human and environmental toxicity information for active ingredients considered as alternatives

(in development)

List 4: Biopesticides registered in CA

Rotations between treatment options, and tank mixtures that include biopesticides can delay pests' development of resistance.

There are registered biopesticides that may be effective alternatives to chlorpyrifos but are not included on the current UC pest management guidelines.

A list of biopesticides currently registered in California is included in list 4.

2. Outreach

Context:

The cancellation of chlorpyrifos means there will be many practical changes for growers to make immediately, as well as continued changes to make over the long term to adapt to chlorpyrifos' unavailability. Getting the word out about what this decision means will be an important part of the process of a successful transition away from chlorpyrifos.

Overarching points that the Work Group emphasized for all components of outreach included:

- **Inclusivity:** the need to find ways to reach the diverse range of Californians affected by this process, including the need to connect with communities whose primary language is not English, and those who do not participate in commodity groups or other common communication networks
- **Consistency:** accurate messaging developed by the most appropriate source so that a broad range of networks can contribute to outreach efforts while retaining accuracy

Recommendations:

2.1 Make sure all current users of chlorpyrifos know about its cancellation and what that means for them

2.2 Resources for the grower community: Promote use of updated University of California Agriculture and Natural Resources pest management guidelines once they are updated to reflect the cancellation of chlorpyrifos

3. Build institutional capacities

Context:

A successful long-term transition towards a safer, thriving agriculture in California will depend on strong institutions to support research, outreach, and education. Public institutions offer a unique perspective in their efforts to achieve the best outcomes for all Californians. This section addresses the need to foster strong public institutions to support the long-term success of transitioning away from chlorpyrifos and toward safer pest management practices.

Recommendations:

3.1 Reinvest in a statewide integrated pest management program

3.2 Rebuild UC Cooperative Extension system with a stable, expanded budget

3.3 Pest exclusion: step up efforts to prevent entry and establishment of new pests

4. Regulatory improvements

Context:

California's Department of Pesticide Regulation operates within the California Environmental Protection Agency and is responsible for protecting human health and the environment through pesticide regulation and registration.

The Work Group developed recommendations on the regulatory process to balance the need for pest management with the need for healthy environments and communities.

Recommendations:

4.1 Adjust DPR staffing and priorities to reflect the high-priority need to identify alternatives to chlorpyrifos

4.2 Support pest control advisors to deepen their knowledge of non-pesticide approaches to pest management through revamped criteria for pest control advisor continuing education units

4.3 Balance need for swift action to identify alternatives to chlorpyrifos with continued need to ensure public safety

5. Basic and applied research priorities

Context:

Work Group members identified adoption of integrated pest management as a goal for pest management throughout California.

This ecosystem-based approach requires an understanding of the interactions between life cycles of the pest, crop, cropping system, soil, and broader regional ecology.

Investment in research to deepen this understanding would benefit California agriculture, and is crucial for identifying a way forward to manage pests in crops where no suitable alternatives to chlorpyrifos have been identified. This investment would need to include research on management approaches beyond replacement with other synthetic chemical active ingredients, such as newer classes of products (biopesticides), other technical approaches (mating disruption), cultural controls, area-wide management and systems approaches.

Recommendations:

5.1 Expand research on basic biology and ecology of pests and beneficial insects

5.2 Support systems-based research that addresses the complexity of pest management approaches and efficacy

5.3 Research on specific crop/pest combinations where chlorpyrifos was the primary management option and there are not sufficient alternatives

6. Alternative approaches

Context:

The Work Group discussed the reasons for using pesticides in agricultural production, and explored ways to address the root causes of pest management challenges. Questions that came up included how to balance the burden of the high cost of production in California (where land prices and regulatory costs are higher) with the desire to sustain a thriving agricultural economy that supports growers, their workers and their neighboring communities.

Alternative approaches could include techniques (such as crop rotation), as well as business management approaches (such as fostering predictable, safe employment for workers). Examples of other entities in California making investments in new approaches include the California Air Resources Board.⁶

Recommendations:

⁶ For example, the Air Resources Board incentive programs for growers adopting new requirements for the “On Road Diesel Rule” and “Off Road/Farm tractor Rule” prior to regulatory deadlines.

6.1 Rejuvenate the Biologically Integrated Farm Systems (BIFS) program

6.2 Invest in research on alternative approaches to agricultural production