

# Chlorpyrifos Special Registration Review

## Response to Public Comments on Draft Scoping Document

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The Minnesota Department of Agriculture  
Pesticide and Fertilizer Management Division  
March 15, 2021



### **Minnesota Department of Agriculture mission statement**

Our mission is to enhance all Minnesotans' quality of life by equitably ensuring the integrity of our food supply, the health of our environment, and the strength and resilience of our agricultural economy.

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## Table of Contents

Comment #1 Importance and effectiveness of chlorpyrifos in managing pests in Minnesota.....	4
Comment #2 Alternative management options.....	4
Comment #3 Judicious use of chlorpyrifos.....	5
Comment #4 Requests about possible opportunities for action .....	6
Comment #5 Process for conducting the review.....	6
Comment #6 Use of the most current human health risk documents.....	7
Comment #7 Request to use additional information in the review .....	7
Comment #8 Chlorpyrifos mammalian toxicity .....	8
Comment #9 Support of the review .....	8

Chlorpyrifos is widely used in Minnesota as an important tool to manage a variety of arthropod pests. Chlorpyrifos is also a source of contamination in multiple surface water bodies in Minnesota and can pose a substantial risk to human health and the environment. Thus, the Commissioner of Agriculture directed the Pesticide and Fertilizer Management Division of the Minnesota Department of Agriculture (MDA) to conduct a special registration review of chlorpyrifos. A draft scoping document for the special registration review of chlorpyrifos was written and made available for public comment from July 20, 2020 to September 17, 2020.

The MDA would like to thank everyone who submitted comments. We received responses from 11 groups or individuals. The full comments can be found on the MDA's website ([www.mda.state.mn.us/pesticide-special-registration-reviews](http://www.mda.state.mn.us/pesticide-special-registration-reviews)). All comments were carefully reviewed and responses to comments can be found below. Comments with common themes have been combined and commenters are listed in alphabetical order. Based on public comments, minor edits were made to the scoping document and the final version of the scoping document can be viewed at the MDA's website ([www.mda.state.mn.us/pesticide-special-registration-reviews](http://www.mda.state.mn.us/pesticide-special-registration-reviews)).

## Comment #1 Importance and effectiveness of chlorpyrifos in managing pests in Minnesota

**Commenters:** AgriGrowth, American Crystal Sugar Company, Corteva, Minnesota Association of Wheat Growers, Minnesota Corn Growers Association, Minnesota Farm Bureau Federation, Minnesota Nursery and Landscape Association, Minnesota Soybean Growers Association, Paul Groneberg, Red River Valley Sugarbeet Growers Association, Southern Minnesota Beet Sugar Cooperative

### **Comment Summary:**

Many commenters commented about the importance and effectiveness of chlorpyrifos in managing pests in Minnesota crops and the utility of chlorpyrifos in managing insecticide resistance.

### **MDA Response:**

The MDA acknowledges that chlorpyrifos is a highly effective pesticide (i.e., results in rapid and high levels of mortality) against a broad taxonomic range of pests (e.g., aphids, beetles, and mites) including important agronomic pests in Minnesota. Additionally, chlorpyrifos can be beneficial as an option for managing pests that have developed resistance to other classes of insecticides, such as pyrethroid resistant soybean aphids. Other benefits of chlorpyrifos include its low risk of contaminating groundwater, low cost relative to certain alternative pesticides, the availability of multiple formulations for application, and the ability to tank mix it with other pesticides.

The MDA would like to reiterate that the current and potential future benefits of chlorpyrifos in managing major pests in Minnesota, including managing insecticide resistance, will be reviewed and summarized in the special registration review.

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## Comment #2 Alternative management options

**Commenters:** AgriGrowth, American Crystal Sugar Company, Corteva, Minnesota Association of Wheat Growers, Minnesota Corn Growers Association, Minnesota Nursery

and Landscape Association, Minnesota Soybean Growers Association, Paul Groneberg, Red River Valley Sugarbeet Growers Association

**Comment Summary:**

Some commenters commented about having few or no alternative pest management options for a variety of pests and crops. Additionally, a few commenters commented on the lack of attention from pesticide companies for certain crops due to relatively small acreage.

**MDA Response:**

The availability of alternative pest management options is an important factor when weighing potential mitigating actions the MDA may take. Recent data about alternative pest management options to chlorpyrifos, with a focus on the Midwest, will be summarized in the special registration review. The MDA does not have a role in the development or production of pesticidal products, however if the lack of attention for specific crops results in fewer pest management options, that will be reflected in summaries of alternative pest management options in the review.

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### Comment #3 Judicious use of chlorpyrifos

**Commenters:** American Crystal Sugar Company, Minnesota Association of Wheat Growers, Minnesota Farm Bureau Federation, Red River Valley Sugarbeet Growers Association

**Comment Summary:**

Some commenters commented on how chlorpyrifos is used only when necessary in a precise targeted manner (e.g., according to the label and/or after employing growing degree days, scouting, economic thresholds). Some commenters also mentioned the attendance of growers at educational events about safely using chlorpyrifos.

**MDA Response:**

The MDA agrees that chlorpyrifos is used judiciously by many. However, from 2008 to 2018, the MDA has detected chlorpyrifos in Minnesota surface waters above the chronic water quality standard in 83 samples, including 18 detections above the maximum (i.e., acute) water quality standard. As of March 2020, 13 surface water bodies in Minnesota were proposed for designation by the MPCA or designated as impaired by the Environmental Protection Agency (EPA) due to chlorpyrifos water quality standard violations. Twelve of the violations were the result of exceedances of the maximum standard. In 2012, the Commissioner of Agriculture designated chlorpyrifos as a “surface water pesticide of concern.” Due to contamination in multiple surface water bodies in Minnesota and the risk chlorpyrifos poses to human health and the environment the Commissioner of Agriculture directed this special registration review of chlorpyrifos be conducted.

## Comment #4 Requests about possible opportunities for action

**Commenters:** Minnesota Nursery and Landscape Association, Minnesota Soybean Growers Association, Paul Groneberg

### Comment Summary:

Some commenters requested specific options regarding mitigating the risks of chlorpyrifos to the environment or potential restrictions on the use of chlorpyrifos (i.e., possible opportunities for action). Specifically, comments requested that the MDA:

1. Conduct a cost benefit analysis
2. Increase and/or improve education and outreach about chlorpyrifos
3. Base potential restrictions on use

### MDA Response:

The opportunities for action will depend on the findings of the special registration review of chlorpyrifos. Any proposed actions will be science-based and arise from a thorough and balanced assessment of the “topics for consideration” outlined in the scoping document.

1. The “benefits of use” for chlorpyrifos is a topic for consideration in the review (page 13 in the scoping document), however, we rely on the EPA’s cost-benefit analysis, so will not conduct our own cost-benefit analysis as that would be redundant.
2. The “MDA’s education and outreach” is also a topic for consideration in the review (page 14 in the scoping document) and the MDA will continue to work with external partners to conduct education and outreach. However, given the detections of chlorpyrifos in surface waters (see comment #3), education and outreach efforts thus far have not adequately mitigated the risks of chlorpyrifos across the state.
3. The unique risks and benefits for different uses of chlorpyrifos will be considered when investigating opportunities for action.

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## Comment #5 Process for conducting the review

**Commenters:** Minnesota Nursery and Landscape Association, Minnesota Soybean Growers Association

### Comment Summary:

Two commenters made comments about the process of conducting the special registration review. Specifically, comments included requests that the MDA:

- 1) Not use California studies on crops not grown in Minnesota as the model to limit use of chlorpyrifos in Minnesota;
- 2) Determine the sources of chlorpyrifos contamination to investigate whether these pathways can be effectively mitigated through enhanced best management practices;
- 3) Comprehensively document, review, and understand the various, crop- and pest-specific uses of chlorpyrifos-based products in Minnesota, including nursery and landscape uses and address the availability and efficacy of alternatives; and

- 4) Include a detailed review and analysis of the MDA’s education and outreach efforts and their effectiveness regarding chlorpyrifos. Additionally, use this analysis to guide and improve future education and outreach initiatives specific to chlorpyrifos and to pesticides in.

**MDA Response:**

1. The opportunities for action will depend on the findings of the special registration review of chlorpyrifos. The science-based review will focus on studies from MN and states with similar crops and climates. However, in some cases, where local data is not available, it is useful to understand the science from other regions and crops. Regional differences will be considered when using studies from other areas.
2. Chlorpyrifos contamination in Minnesota surface water likely results from nonpoint sources which are difficult to identify and quantify. However, the review will consider potential pathways such as spray drift, runoff, and volatilization to investigate opportunities to mitigate potential contamination through specific pathways.
3. Chlorpyrifos products are registered to manage arthropods such as insects, ticks, and mites on or in agricultural crops, nursery plants, ornamentals, wood structures, cattle, and other habitats. The special registration review will provide a summary of the various, current and potential future crop- and pest-specific uses of chlorpyrifos-based products in Minnesota, including nursery and landscape uses. Additionally, the review will address and consider available alternatives.
4. The MDA’s current and past chlorpyrifos education and outreach efforts will be described in the review. The review will also evaluate the effectiveness of these educational programs and explore opportunities to strengthen and expand education and outreach efforts.

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## Comment #6 Use of the most current human health risk documents

**Commenters:** AgriGrowth, Corteva, Minnesota Corn Growers Association

**Comment Summary:**

Some commenters requested that the MDA use, at the time, forthcoming documents on chlorpyrifos from the EPA’s Office of Pesticide Programs (OPP). Specifically, an updated Human Health Risk Assessment and a proposed Registration Review Interim Decision for chlorpyrifos.

**MDA Response:**

In September 2020, after the comment period for the MDA’s scoping document closed, the EPA-OPP issued a Draft Ecological Risk Assessment and a Revised Human Health Risk Assessment for public comment, and an updated Drinking Water Assessment. The MDA will review and use, as appropriate, all publicly available relevant documents, including EPA-OPP documents on chlorpyrifos. This has been clarified in the revised scoping document on page 3 and 9.

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## Comment #7 Request to use additional information in the review

**Commenter:** Corteva

**Comment Summary:**

The commenter provided documents in relation to the EPA’s 2016 chlorpyrifos human health risk assessment (“Public comments: Chlorpyrifos revised human health risk assessment for registration review [EPA’s Office of Pesticide Programs, November 3,2016]”) and the EPA’s denial of the Petition to revoke all tolerances and cancel all registrations for chlorpyrifos (“Dow AgroScience LLC’s response to objections to the EPA’s denial of petition to revoke all tolerances and cancel all registrations for chlorpyrifos”) and asked the MDA to review and consider them as part of the special registration review of chlorpyrifos.

**MDA Response:**

The MDA will consider any new and unique information that has not previously been submitted to and reviewed by the EPA. The MDA will work with the EPA to determine if the documents were considered while making decisions about chlorpyrifos. The MDA’s special registration reviews are not intended to be redundant of analyses and decisions reached by the EPA during federal registration.

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**Comment #8 Chlorpyrifos mammalian toxicity**

**Commenters:** AgriGrowth, Corteva

**Comment Summary:**

Two commenters provided their opinions about chlorpyrifos mammalian toxicity and stated that regulatory authorities should work within a standardized regulatory framework relying on specified regulatory studies conducted within the regiment of “Good Laboratory Practices” to set regulatory endpoints.

**MDA Response:**

The MDA will rely on the expertise of the EPA and the Minnesota Department of Health to fully review and assess the science related to the mammalian and human health risks of chlorpyrifos for the special registration review. According to the EPA’s website, the EPA’s Good Laboratory Practice Standards (GLPS) compliance monitoring program ensures the quality and integrity of test data submitted to the Agency in support of a pesticide product registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), section 5 of the Toxic Substances Control Act (TSCA), and pursuant to testing consent agreements and test rules issued under section 4 of TSCA.

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**Comment #9 Support of the review**

**Commenters:** Corteva, Minnesota Nursery and Landscape Association

**Comment Summary:**

One commenter expressed their support for the proposed special registration review of chlorpyrifos and another commenter expressed support for MDA’s priority of avoiding “Special Reviews” that are redundant to those conducted by EPA.



**MDA Response:**

The MDA appreciates this support.

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