



Protecting human health  
and the environment

Protéger la santé  
humaine et l'environnement

Re-evaluation Note

REV2026-01

# Project Plan for Cumulative Health Risk Assessment – Organophosphate Pesticides

*(publié aussi en français)*

**6 March 2026**

This document is published by the Health Canada Pest Management Regulatory Agency.  
For further information, please contact:

**Publications**

Pest Management Regulatory Agency  
Health Canada

2 Constellation Drive  
8<sup>th</sup> floor, A.L. 2608 A  
Ottawa, Ontario K1A 0K9

**Internet:**

[canada.ca/pesticides](http://canada.ca/pesticides)  
[pmra.publications-arla@hc-sc.gc.ca](mailto:pmra.publications-arla@hc-sc.gc.ca)

**Information Service:**

1-800-267-6315  
[pmra.info-arla@hc-sc.gc.ca](mailto:pmra.info-arla@hc-sc.gc.ca)



Health Canada  
Santé Canada

Canada

ISSN: 1925-0630 (print)  
1925-0649 (online)

Catalogue number: H113-25/2026-5E (print version)  
H113-25/2026-5E-PDF (PDF version)

**© His Majesty the King in Right of Canada, as represented by the Minister of Health Canada, 2026**

All rights reserved. No part of this information (publication or product) may be reproduced or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, or stored in a retrieval system, without prior written permission of Health Canada, Ottawa, Ontario K1A 0K9.

## Background

In Canada, the cumulative health risk assessment of active ingredients belonging to the organophosphate (OP) class of pesticides, as described in SPN2018-02, *Cumulative Health Risk Assessment Framework*, is underway. Cumulative risk assessments are aimed at evaluating human health risks associated with co-exposure to two or more pesticides that have a common mechanism of toxicity. For OP pesticides, the common mechanism of toxicity relates to their shared ability to irreversibly bind to and phosphorylate the acetylcholinesterase (AChE) enzyme in mammalian central and peripheral nervous systems.

As outlined in REV2024-02, *Organophosphate Pesticides – Cumulative Health Risk Scoping Assessment, Problem Formulation and Planned Approach of Analysis*, the OP class of pesticides consists of 10 technical grade active ingredients registered in Canada, acephate, azamethiphos, bensulide, dichlorvos, dimethoate, malathion, naled, phorate, phosmet and tetrachlorvinphos, as well as consideration of 19 additional pesticides that could be present on imported food commodities. These include chlorpyrifos, diazinon, methamidophos, methidathion, oxydemeton-methyl, azinphos-methyl, cadusafos, chlorpyrifos-methyl, coumaphos, dicrotophos, ethion, ethoprop/ethoprophos, monocrotophos, phosalone, pirimiphos-methyl, profenofos, propetamphos, terbufos, and trichlorfon.

In addition to these OP pesticides, metabolites/transformation products of these pesticides that also inhibit AChE will be considered in the cumulative risk assessment including some oxon metabolites (including bensulide oxon, malaoxon, phorate oxon, chlorpyrifos oxon, diazoxon, omethoate) and methamidophos as a metabolite of acephate. Together, the OP pesticides and relevant metabolites/transformation products form the cumulative assessment group (CAG) of the OP CRA.

The process Health Canada's Pest Management Regulatory Agency used to define the OP CRA CAG, the planned approach for analyzing the OP CRA and a description of the problem formulation elements that will be considered in the OP CRA are outlined in Appendices II and III of REV2024-02.

The project plan below outlines the timelines, the anticipated areas of focus for the risk assessment, and the data submitted for the cumulative risk assessment of the OP pesticides.

## Project plan

### Anticipated timeline

The cumulative risk assessment process for the OP pesticides is aligned with the process map described in SPN2018-02 and as described in the detailed planned approach in Appendix III of REV2024-02. The proposed decision for the OP cumulative health risk assessment is anticipated to be published for consultation by Q4 2029-30.<sup>1</sup> The timeline may be affected if, during the risk assessment, Health Canada identifies additional areas of focus that should be considered. The target date for the final decision on the cumulative health risk assessment will be determined

---

<sup>1</sup> Q4 (January-March)

following the public consultation period of the proposed decision, and communicated in the annual Pest Management Regulatory Agency Re-evaluation and Special Review Work Plan.

The anticipated publication timeline noted above accounts for on-going individual re-evaluations of four OP pesticides included in this cumulative assessment: bensulide, naled, phorate and tetrachlorophinvos. The outcome of these re-evaluations need to be completed first in order to inform the OP CRA. As indicated in SPN2018-02, *Cumulative Health Risk Assessment Framework*, it is essential that toxicological and exposure assessments of individual pesticides are up-to-date prior to undertaking the complex task of assessing cumulative health effects. As outlined in REV2025-01, *Pest Management Regulatory Agency Re-evaluation and Special Work Plan 2025-2030*, the proposed re-evaluation decisions for these four OP pesticides are scheduled for publication in 2027-2028.

### **Areas of focus**

REV2024-02 outlined the scoping assessment, problem formulation and planned approach of analysis for the OP pesticides cumulative risk assessment. The scoping assessment identified the available information relating to the evidence of a common mechanism of toxicity, use pattern, and likelihood of co-exposure to the pesticides being considered, and summarized the areas of focus for the OP pesticides cumulative risk assessment. It was concluded that a common mechanism of toxicity for the OP pesticides exists and that the CAG will include 29 active ingredients and their relevant metabolites, where applicable. Fifteen of the OP pesticides will be considered quantitatively and the remaining 14 will be considered qualitatively.

The OP CRA will examine potential exposures that may occur through the dietary pathway, including exposure through drinking water, and non-occupational sources of residential exposure. The potential for co-exposure to the OP pesticides within the CAG will be considered for the oral (dietary and incidental oral), dermal and inhalation routes.

### **Data submitted**

Health Canada required additional data from the registrants of the technical grade active ingredients for the OP pesticides related to human health (toxicology and exposure) and environmental chemistry and fate. Available data have been submitted to Health Canada. A summary of the data call-in is found in the PMRA's Public Registry.

### **Additional information**

PMRA documents can be found in the Pesticides section of Canada.ca. PMRA documents are also available through the Pest Management Information Service:

Phone: 1-800-267-6315 within Canada, or 1-613-736-3799 outside Canada (long distance charges apply)

Fax: 1-613-736-3798

E-mail: [hc.pmra.info-arla.sc@canada.ca](mailto:hc.pmra.info-arla.sc@canada.ca)