Re-evaluation Decision RVD2026-04

Potassium Bicarbonate and Its Associated End-use Products

(publié aussi en français)

4 August 2026

This document is published by the Health Canada Healthy Environments and Consumer Safety Branch. For more information, please contact:

Publications

Pesticides Regulatory Directorate
Healthy Environments and Consumer Safety Branch

Health Canada

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

Internet:

canada.ca/pesticides
pesticides-info@hc-sc.gc.ca

Information Service:

1-800-267-6315
pesticides.publications@hc-sc.gc.ca

Health Canada Santé Canada

Canada

ISSN: 1925-1017 (print)
1925-1025 (online)

Catalogue number: H113-28/2026-4E (print version)
H113-28/2026-4E-PDF (PDF version)

Table of contents

Re-evaluation decision for Potassium Bicarbonate and associated end-use products

Under the authority of the *Pest Control Products Act,* all registered pesticides must be re-evaluated by Health Canada to ensure that they meet current health and environmental standards and have value. The re-evaluation considers data and information from pesticide manufacturers, incident reports and other regulatory agencies, as well as comments directly related to the proposed re-evaluation decision, such as comments directed to the Science evaluation, received during public consultations. Health Canada applies internationally accepted risk assessment methods as well as current risk management approaches and policies. More details, on the legislative framework, risk assessment and risk management approach, are provided under the Evaluation Approach of this document.

Potassium bicarbonate is a contact fungicide that acts by inhibiting fungus mycelium development following spore germination. Potassium bicarbonate is registered for control or suppression of powdery mildew on a wide range of greenhouse and field crops including certain ornamentals, vegetables, fruits, herbs and spices, cannabis grown in greenhouses or other enclosed growing structures and field-grown cannabis and industrial hemp. It is also registered for suppression of *Botrytis* grey mold on grapes and partial suppression of primary infections of apple scab in orchards. Currently registered products containing potassium bicarbonate can be found in the Pesticide Product Information Database and in Appendix I.

The Proposed Re-evaluation Decision PRVD2025-06, *Potassium Bicarbonate*[1] containing the evaluation of potassium bicarbonate and proposed decision, underwent a 90 day consultation period ending on 8 September 2025. PRVD2025-06 proposed continued registration of potassium bicarbonate and all associated end-use products in Canada, with updates to label directions and precautions to reflect the current labelling standards and improve clarity (Appendix II). Risk mitigation measures included a drift statement for all commercial class end-use product labels to minimize potential for spray drift to residential areas, and updates to precautionary label statements as per current labelling standards such as PPE, restricted-entry interval, storage and disposal.

Written comments were received during the public consultation period conducted in accordance with section 28 of the *Pest Control Products Act*. However, they did not relate to the health, environmental or value assessments in the proposed re-evaluation decision PRVD2025-06, *Proposed Re-evaluation Decision for Potassium Bicarbonate and Its Associated End-use Products*. Therefore, this decision is consistent with the proposed re-evaluation decision as described in PRVD2025-06. In addition, is it to be noted that the registrant already voluntarily implemented the limitation of the application of potassium bicarbonate for use on cannabis grown in greenhouses, other enclosed growing structures and grown outdoors during the vegetative stage only in response to the publications of Health Canada's guidance document (July 2025), *Classification Of Cannabis and Industrial Hemp Crops as Use Sites, Data Requirements and Label Amendments.*

[1] "Consultation statement" as required by subsection 28(2) of the *Pest Control Products Act*.

A reference list of information used as the basis for the proposed re-evaluation decision is included in PRVD2025-06; no further information was used in the final re-evaluation decision. Therefore, the complete reference list of all information used in this final re-evaluation decision is set out in PRVD2025-06.

This document presents the final re-evaluation decision[2] for the re-evaluation of potassium bicarbonate, including the required amendments (risk mitigation measures) to protect human health and the environment, as well as label amendments required to bring labels to current standards. All products containing potassium bicarbonate that are registered in Canada are subject to this re-evaluation decision.

Re-evaluation decision for potassium bicarbonate

Health Canada has completed the re-evaluation of potassium bicarbonate. Under the authority of the *Pest Control Products Act*, Health Canada has completed all required evaluations and consultations and has determined that the registration of products containing potassium bicarbonate is required to be amended, in accordance with paragraph 21(2)(a) of the *Pest Control Products Act*. An evaluation of available scientific information respecting the health and environmental risks and value of potassium bicarbonate found that all uses of potassium bicarbonate products meets current standards for protection of human health and the environment and has acceptable value when used according to the amended conditions of registration which includes new mitigation measures. Label amendments, as summarized below and listed in Appendix II, are required.

Risk mitigation measures

Registered pesticide product labels include specific directions for use. Directions include risk mitigation measures to protect human health and the environment and must be followed by law. The required amendments, including any revised/updated label statements and mitigation measures, as a result of the re-evaluation of potassium bicarbonate, are summarized below. Refer to Appendix II for details.

Human health

Label improvements to meet current standards:

Risk mitigation:

To protect workers and those entering treated areas from exposure, the following risk-reduction measures are required for continued registration of potassium bicarbonate in Canada:

- Update personal protective equipment, restricted-entry interval, and spray drift statement to meet current standards.

[2] "Decision statement" as required by subsection 28(5) of the *Pest Control Products Act*.

- Update precautionary statements to include respirator and ventilation requirements for all the labelled crops treated in enclosed areas using ultra-low volume method of application.

Environment

Label improvements to meet current standards:

Risk mitigation:

To protect the environment, the following risk-reduction measures are required:

- Label amendments to meet current standards including disposal statement and use directions (spray drift).

Implementation of the re-evaluation decision

Regulatory Directive DIR2018-01, *Policy on Cancellations and Amendments Following Re-evaluation and Special Review* provides information and general timelines regarding the implementation of post-market decisions, (for example, up to 24-month timeline for label amendments and up to 36-month phase-out timeline for cancelled registrations), and Information Note: *Update on implementation of post-market decisions* provides additional information on phase-out measures for post-market decisions that include cancellations. The post-market decision considers potential health and environmental risks regarding the use of the pest control product, and its value, when establishing the implementation timelines.

Amendment timeframe

The implementation timeline of 24 months for the required amendments (mitigation measures and label updates) for pest control products containing potassium bicarbonate is considered acceptable. These required amendments must be implemented within 24 months after the publication date of this decision document.

Refer to Appendix I for details on specific products impacted by this decision.

Next steps

To comply with this decision, the required amendments (mitigation measures and label updates) must be implemented on all product labels no later than 24 months after the publication date of this decision document. Accordingly, both registrants and retailers will have up to 24 months from the date of this decision document to transition to selling the product with the newly amended labels. Similarly, users will also have the same 24-month period from the date of this decision document to transition to using the newly amended labels, which will be available on the Public Registry.

Refer to Appendix I for details on specific products impacted by this decision.

Other information

The relevant confidential test data on which the decision is based (as referenced in PRVD2025-06 are available for public inspection, upon application, in the Pesticides Regulatory Directorate's Reading Room. For more information, please contact the Pesticides Information Service.

Any person may file a notice of objection[3], which must be based on scientific grounds, regarding this decision on potassium bicarbonate and its associated end-use products within 60 days from the date of publication of this Re-evaluation Decision through the Public Engagement Portal (Public Engagement Forms - Notice of Objection). The request for reconsideration must include the Notice of Objection form, the scientific explanation of the objection and the supporting scientific evidence in possession of the requestor that would not already be in the Health Canada's possession or cite specific Health Canada documentation they wish to rely on as supporting evidence (for example, scientific reports) in the form of electronic copies of cited references. Each of the references provided or cited must be clearly associated with the objection it supports. Failure to provide a complete package may result in the Notice of Objection being considered ineligible for further consideration by Health Canada. For more information regarding the basis for objecting (which must be based on scientific grounds), please refer to the Pesticides and Pest Management portion of the Canada.ca website or contact the Pesticides Information Service.

[3] As per subsection 35(1) of the *Pest Control Products Act*

Evaluation approach

Legislative framework

The Minister of Health's primary objective under the *Pest Control Products Act* (or the Act) subsection 4(1) is to prevent unacceptable risks to individuals and the environment from the use of pest control products.

As noted in the preamble of the Act, it is in the national interest that the attainment of the objectives of the federal regulatory system continue to be pursued through a scientifically-based national registration system that addresses risks to human health, the environment and value both before and after registration and applies to the regulation of pest control products throughout Canada; and that pest control products with acceptable risk and value be registered for use only if it is shown that their use would be efficacious and if there is acceptable risk to human health and the environment, taking into account the conditions of registration.

For the purposes of the Act, the health or environmental risks of a pest control product are acceptable if there is reasonable certainty that no harm to human health, future generations or the environment will result from exposure to or use of the product, taking into account its conditions of registration, as per subsection 2(2) of the *Pest Control Products Act*.

Risk for the human health and environment, and value are defined under the Act subsection 2(1) as follows:

> **Health risk**, in respect of a pest control product, means the possibility of harm to human health resulting from exposure to or use of the product, taking into account its conditions or proposed conditions of registration.
>
> **Environmental risk**, in respect of a pest control product, means the possibility of harm to the environment, including its biological diversity, resulting from exposure to or use of the product, taking into account its conditions or proposed conditions of registration
>
> **Value**, in respect of a pest control product, means the product's actual or potential contribution to pest management, taking into account its conditions or proposed conditions of registration, and includes the product's (a) efficacy; (b) effect on host organisms in connection with which it is intended to be used; and (c) health, safety and environmental benefits and social and economic impact.

When evaluating the health and environmental risks of a pesticide and determining whether those risks are acceptable, subsection 19(2) of the *Pest Control Products Act* requires Health Canada to apply a scientifically-based approach. The science-based approach to assessing pesticides considers both the toxicity and the level of exposure of a pesticide in order to fully characterize risk.

Risk and value assessment framework

Health Canada uses a comprehensive body of modern scientific methods and evidence to determine the nature as well as the magnitude of potential risks posed by pesticides. This

approach allows for the protection of human health and the environment through the application of appropriate and effective risk management strategies, consistent with the purpose described in the preambular text set out above.

Health Canada's approach to risk and value assessment is outlined in A Framework for Risk Assessment and Risk Management of Pest Control Products.[4] A high-level overview is provided below.

i) Assessing potential health risks

With respect to the evaluation and management of potential health risks, Health Canada's risk assessments follow a structured, predictable process that is consistent with international approaches and the Health Canada Decision-Making Framework for Identifying, Assessing, and Managing Health Risks.[5]

The evaluation of potential health risks begins with a consideration of the toxicological profile of a pesticide to establish reference doses at which no adverse effect is expected and against which the expected exposure is assessed. This includes, where appropriate, the use of uncertainty (protection) factors to provide additional protection that accounts for the variation in sensitivity among members of human population and the uncertainty in extrapolating animal test data to humans. Under certain conditions, the *Pest Control Products Act* requires the use of another factor to provide additional protection to pregnant women, infants, and children. Other uncertainty factors, such as a database deficiency factor, are considered in specific cases. More details related to the application of the uncertainty factors are provided in SPN2008-01.[6]

Assessments estimate potential health risks to defined populations[7] under specific exposure conditions. They are conducted in the context of the registered conditions of use, such as the use of a pesticide on a particular field crop using specified application rates, methods and equipment. Potential exposure scenarios consider exposures during and after application of the pesticide in occupational or residential settings, food and drinking water exposure, or exposure when interacting with treated pets. Also considered are the anticipated durations (short-, intermediate- or long-term) and routes of exposure (oral, inhalation, or skin contact). In addition, an assessment of health risks must consider available information on aggregate exposure and cumulative effects.

---

4 Guidance Document, A Framework for Risk Assessment and Risk Management of Pest Control Products (https://www.canada.ca/en/health-canada/services/consumer-product-safety/reports-publications/pesticides-pest-management/policies-guidelines/risk-management-pest-control-products.html)

5 Health Canada Decision-Making Framework for Identifying, Assessing, and Managing Health Risks - August 1, 2000 (https://www.canada.ca/en/health-canada/corporate/about-health-canada/reports-publications/health-products-food-branch/health-canada-decision-making-framework-identifying-assessing-managing-health-risks.html)

6 Science Policy Note: The Application of Uncertainty Factors and the Pest Control Products Act Factor in the Human Health Risk Assessment of Pesticides (https://www.canada.ca/en/health-canada/services/consumer-product-safety/reports-publications/pesticides-pest-management/policies-guidelines/science-policy-notes/2008/application-uncertainty-factors-pest-control-products-act-factor-human-health-risk-assessment-pesticides-spn2008-01.html)

7 Consideration of Sex and Gender in Pesticide Risk Assessment (https://www.canada.ca/en/health-canada/services/consumer-product-safety/reports-publications/pesticides-pest-management/fact-sheets-other-resources/consideration-sex-gender-pesticide-risk-assessment-infographic.html)

ii) Assessing risks to the environment

With respect to the evaluation of environmental risks, Health Canada's environmental risk assessments follow a structured, tiered approach to determine the likelihood that exposure to a pesticide can cause adverse effects on individual organisms, populations, or ecological systems. This involves screening assessments starting with simple methods, conservative exposure scenarios and sensitive toxicity effects metrics, then moving on, where required, to more refined assessments that can include exposure modelling, monitoring data, results from field or mesocosm studies, and probabilistic risk assessment methods.

The environmental assessment considers both the exposure (environmental fate, chemistry, and behaviour, along with the application rates and methods) and hazard (toxic effects on organisms) of a pesticide. The exposure assessment examines the movement of the pesticide in soil, water, sediments and air, as well as the potential for uptake by plants or animals and transfer through the food web. The possibility for the pesticide to move into sensitive environmental compartments such as groundwater or lakes and rivers, as well as the potential for atmospheric transport, is also examined. The hazard assessment examines effects on a large number of internationally recognized indicator species of plants and animals (terrestrial organisms include invertebrates such as bees, beneficial arthropods, and earthworms, birds, mammals, plants; aquatic organisms include invertebrates, amphibians, fish, plants and algae), and includes considering effects on biodiversity and the food chain. Acute and chronic effects endpoints are derived from laboratory and field studies that characterize the toxic response and the dose–effect relationship of the pesticide.

The characterization of environmental risk requires the integration of information on environmental exposure and effects to identify which, if any, organisms or environmental compartments may be at risk, as well as any uncertainties in characterizing the risk.

iii) Value assessment

Value assessments consist of two components: an assessment of the performance of a pest control product and its benefits.

During re-evaluation, value is examined under current conditions and in light of alternative pest control methods (both chemical and nonchemical) that may have been developed since the pesticide was first registered. An assessment of the benefits associated with the pesticide may also be conducted to demonstrate its value in the current context, and to identify potential alternatives.

Risk management

The outcomes of the assessments of risks to human health and the environment, and the assessment of value, form the basis for identifying risk management strategies. These include appropriate risk mitigation measures and are a key part of decision-making on whether health and environmental risks are acceptable. The development of risk management strategies take place within the context of the pesticide’s conditions of registration. Conditions can relate to, among other things, the specific use (for example, application rates, timing, frequency and method of application), personal protective equipment, pre-harvest intervals, restricted-entry intervals, buffer zones, spray drift and runoff mitigation measures, handling, manufacture,

storage or distribution of a pesticide. If feasible conditions of use that have acceptable risk and value cannot be identified, the pesticide use will not be eligible for registration.

The selected risk management strategy is then implemented as part of the re-evaluation decision. The pesticide registration conditions include legally-binding use directions on the label. Any use in contravention of the label or other specified conditions is illegal under the *Pest Control Products Act*. Implementation of post-market decisions follow the framework articulated in the *Policy on Cancellations and Amendments Following Re-evaluation and Special Review*.[8]

Following a decision, continuous oversight activities such as post-market review, monitoring and surveillance, including incident reporting, all play an essential role to help ensure the continued acceptability of risks and value of registered pesticides.

[8] Regulatory Directive DIR2018-01, Policy on Cancellations and Amendments Following Re-evaluation and Special Review (https://www.canada.ca/en/health-canada/services/consumer-product-safety/reports-publications/pesticides-pest-management/policies-guidelines/regulatory-directive/2018/dir2018-01-policy-cancellations-amendments.html).

Appendix I Registered products containing Potassium Bicarbonate in Canada

Table 1 Products containing potassium bicarbonate requiring (label) amendments[1]

Registration number	Marketing class	Registrant	Product name	Formulation type	Active ingredient
28094	Technical	BioWorks Inc.	MilStop Technical	Dust or powder	99.9%
32450	Technical	La Cooperative Pomicole Deux-Montagnes	Potassium Bicarbonate Technical	Solid	100%
28095	Commercial	BioWorks Inc.	MilStop Foliar Fungicide	Soluble powder	85%
32451	Commercial	La Cooperative Pomicole Deux-Montagnes	Potassium Bicarbonate	Soluble granules	100%

[1]as of 5 January 2026, excluding discontinued products or products with a submission for discontinuation

Appendix II Label amendments for products containing Potassium Bicarbonate

The label amendments presented below do not include all label requirements for individual end-use products, such as first aid statements, disposal statements, precautionary statements and supplementary protective equipment. Information on labels of currently registered products should not be removed unless it contradicts the following label statements.

A. For all the technical grade active ingredient products:

1. On the principal display panel,

   Replace: "GUARANTEE"

   With: "ACTIVE INGREDIENT"

2. Under "DISPOSAL", update with the following:

   Canadian manufacturers should dispose of unwanted active ingredients and containers in accordance with municipal and provincial or territorial regulations. For additional details and cleanup of spills, contact the registrant and the provincial or territorial regulatory agency.

3. Update "NOTICE TO USER" as per the Pest Control Products Regulations (SOR/2006-124).

B. For the commercial end use product (Reg. No. 28095):

1. **Move** the section "PERSONAL PROTECTIVE EQUIPMENT (PPE)" to the "PRECAUTIONS" section.

2. **Replace** the personal protective equipment (PPE) statements with the following table:

Application equipment and engineering controls	**Personal protective equipment**	
	Mixer/loader/cleanup and repair	**Applicator**
Field sprayers (groundboom equipment) **Open-cab**	Wear coveralls over a long-sleeved shirt, long pants, chemical-resistant gloves, socks and chemical-resistant footwear.	
Field sprayers (groundboom equipment) **Closed-cab**	Wear coveralls over a long-sleeved shirt, long pants, chemical-resistant gloves, socks and chemical-resistant footwear.	Wear a long-sleeved shirt, long pants, socks and shoes.

Application equipment and engineering controls	Personal protective equipment	
	Mixer/loader/cleanup and repair	Applicator
Airblast equipment **Open-cab**	Wear coveralls over a long-sleeved shirt, long pants, chemical-resistant gloves, socks and chemical-resistant footwear.	Wear coveralls over a long-sleeved shirt, long pants, chemical-resistant gloves, socks, chemical-resistant footwear, headgear,[1] and protective eyewear (goggles or face shield).
Airblast equipment **Closed-cab**	Wear coveralls over a long-sleeved shirt, long pants, chemical-resistant gloves, socks and chemical-resistant footwear.	Wear a long-sleeved shirt, long pants, socks and shoes.
Handheld sprayers	Wear coveralls over a long-sleeved shirt, long pants, chemical-resistant gloves, socks and chemical-resistant footwear.	
Ultra Low Volume (ULV) Application (including cold foggers, thermal foggers, electrostatic sprayers)[2]	Wear coveralls over a long-sleeved shirt, long pants, chemical-resistant gloves, socks and chemical-resistant footwear.	Wear chemical-resistant coveralls with a chemical-resistant hood over a long-sleeved shirt, long pants, chemical-resistant gloves, socks, chemical-resistant footwear, a respirator[3] and protective eyewear (goggles or face shield).

[1] Chemical-resistant headgear includes chemical resistant Sou'Wester hat, chemical-resistant rain hat or large-brimmed waterproof hat and hood with sufficient neck protection.

[2] When unspecified, it is assumed that both stationary and handheld ULV equipment will be used.

[3] Respirator must have a NIOSH-approved organic-vapour-removing cartridge with a prefilter approved for pesticides OR a NIOSH-approved canister approved for pesticides

3. **Update** all REI statements with the following text:

   Restricted-Entry Interval (REI): DO NOT enter or allow worker entry into treated areas for 4-hours or until sprays have dried. If early entry is required, PPE must be worn, as specified by the method of application.

4. **Update** the drift statement:

   Apply only when the potential for drift beyond the area to be treated is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment, and sprayer settings.

5. **Replace:** Treatment of greenhouses and facilities used for indoor commercial cannabis production should be carried out at times when the areas to be treated are closed to staff, public, and customers.

   With: Treatment of cannabis grown indoors in greenhouses or other enclosed structures, should be carried out at times when the areas to be treated are closed to staff, public, and customers.

6. **Replace:** Greenhouses and facilities used for indoor commercial cannabis production treated using an ultra-low volume method of application must be well ventilated prior to entry or re-entry.

   With: When ultra-low volume applications are carried out in greenhouses or other enclosed structures, the treatment area must be well ventilated prior to entry or re-entry.

7. For "Field sprayer application",

   Update text with: "DO NOT apply when wind speed is less than 1 km/h. Avoid application of this product when winds are gusty. DO NOT apply with sprays finer than the American Society of Agricultural and Biological Engineers (ASABE) S572 (572.1 to 572.3) medium classification. Boom height must be 60 cm or less above the crop or ground."

8. For "Airblast application",

   Update text with: "DO NOT apply when wind speed is less than 1 km/h. Avoid application of this product when winds are gusty. DO NOT direct spray above plants to be treated. Turn off outward pointing nozzles at row ends and outer rows. DO NOT apply when wind speed is greater than 16 km/h at the application site as measured outside of the treatment area on the upwind side."

9. **Update** the pre-harvest interval to the following text:

   Pre-harvest Interval: The harvest of crops is permitted on the day of application except for Cannabis and Industrial Hemp grown for smoking and vaping. Refer to applications instructions for cannabis and industrial hemp for specific details.

C. For the commercial end use product (Reg. No. 32451):

1. On the principal display panel,

   Replace: "GUARANTEE"

   With: "ACTIVE INGREDIENT"

2. Under “PRECAUTIONS”,

   Update the required personal protective equipment (PPE) based on the application method:

   Outdoor Airblast (open cab): Wear a long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes during mixing, loading, application, clean-up and repair. In addition, wear protective eyewear (goggles or face shield) during open-cab application.

   Outdoor Airblast (closed cab): Wear a long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes during mixing, loading, application, clean-up and repair. Gloves are not required during application within a closed cab.

3. Update the drift statement to the following text:

   Apply only when the potential for drift beyond the area to be treated is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment, and sprayer settings.

4. Under “DISPOSAL”, update the related statement to the following text:

   For information on disposal of unused, unwanted product, contact the registrant or the provincial or territorial regulatory agency. Contact the registrant and the provincial or territorial regulatory agency in case of a spill, and for cleanup of spills.

5. Under DIRECTIONS FOR USE section, add/update application statement as follows:

   Airblast application: DO NOT apply when wind speed is less than 1 km/h. Avoid application of this product when winds are gusty. DO NOT direct spray above plants to be treated. Turn off outward pointing nozzles at row ends and outer rows. DO NOT apply when wind speed is greater than 16 km/h at the application site as measured outside of the treatment area on the upwind side.

6. Update “ NOTICE TO USER" as per the Pest Control Products Regulations (SOR/2006-124).