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Regulatory Proposal

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Allowing Use of Pesticides in Vertical Farms

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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.publications@hc-sc.gc.ca

Information Service:

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

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Consultation Forward

This document contains the proposed policy for use of non-conventional and microbial pesticides in vertical farms.

This document is open for public consultation for 45 days from the publication date. Health Canada will consider all comments received before finalizing the science policy notice.

Please forward your comments to the Pesticides Publications Section, through the Public Engagement Portal on the Pesticides section of Canada.ca¹ (Public Engagement Portal Forms - Consultation Comment) and include:

- The title of this consultation document;
- Your full name and organization;
- Your phone number; and
- Your complete mailing address or email address.

1.0 Purpose

The purpose of this document is to propose an approach to adding the use of non-conventional and microbial pesticides in vertical farms to product labels. Upon implementation of this proposed change, non-conventional and microbial pesticides already registered for a specific crop/site and pest combination in a greenhouse can be used in vertical farms for that specific crop/site and pest combination, pursuant to conditions outlined in this policy.

2.0 Background

As outlined in Information Note: *Vertical farming and pest control products*² published on Canada.ca in 2022, no pesticides are currently registered for use in vertical farming operations in Canada.

A vertical farm produces crops grown:

- in appropriate media, for instance hydroponically, aeroponically or in soil;
- indoors on vertically stacked or inclined layers and/or integrated in other vertical structures; and
- in a location that relies solely or largely on artificial lighting.

As a relatively new method of crop production, the information had indicated that there was insufficient scientific data to support the safe and effective use of pesticides in vertical farming production systems.

¹ <https://www.canada.ca/en/health-canada/services/consumer-product-safety/pesticides-pest-management.html>

² Health Canada. 2022. *Information Note: Vertical farming and pest control products*. <https://www.canada.ca/en/health-canada/services/consumer-product-safety/reports-publications/pesticides-pest-management/fact-sheets-other-resources/vertical-farming-pest-control-products.html>, accessed August 2025.

In 2024, Health Canada continued to gather information on vertical farm systems through the distribution of a prepared questionnaire to external experts to inform a strategy to support the future use of pesticides in vertical farms. Respondents were asked to provide information about aspects of growing facilities, production systems, crops and pest pressures. The intent was to use data provided to develop an appropriate approach to assess potential exposure and risks associated with the use of pesticides and their value.

3.0 Proposed approach to adding pesticide use in vertical farms

Following the review of available information, including feedback from stakeholders, and with a greater understanding of the practices of vertical farming, Health Canada is proposing a revised approach on adding pesticide use to vertical farms.

Based on the feedback received, Health Canada has determined that the data required to fulfill registration for greenhouse uses (Use-site Category 5 and 6) is sufficient to assess acceptability of risks to the environment and human health, as well as value associated with the use of non-conventional and microbial pesticides in vertical farms.

Health Canada is proposing to permit the use of non-conventional and microbial pesticides in vertical farms for specific crop/sites and pests, if they are already registered for use in greenhouses for that crop/site and pest. In order to use these products on vertical farms, Health Canada will require registrants to make a label amendment through notifiable change to include vertical farm use. This notification application must be done solely for the purpose of adding the standard wording described in Section 3.2 and cannot include any other proposed changes. .

3.1 Scope of application

This policy is limited to non-conventional and microbial pesticides and does not apply to conventional pesticides.

This policy only applies to vertical farms that can fully comply with the existing labels, as well as the additional requirements highlighted in this policy, such as ventilation.

3.2 Label changes

For pesticides used in vertical farms, the required labelling requirements are as follows:

- Under DIRECTIONS FOR USE, “This product can be used in vertical farms to manage the specific pests on crops and/or sites listed on this label for use in greenhouses. Follow the use directions for greenhouses including all precautionary statements and restrictions applicable to greenhouse uses.”

For Commercial Class or Restricted Class, the following label statements are required:

- Under PRECAUTIONS, “DO NOT use in vertical farms if the ventilation system is shared with public spaces or residential areas.”

4.0 What are non-conventional or microbial pesticides?

Non-conventional and microbial pesticides are identified at the time that the Minister decides that an active ingredient meets the established criteria during the review of an application for registration.

Non-conventional pesticide products are defined to contain active ingredients that have one or more of the following characteristics:

- low toxicity to non-target organisms (products with low toxicity to humans and other non-target organisms are expected to have minimal environmental and health risks, even if exposure is extensive);
- low potential for their use to result in significant human or environmental exposure;
- not persistent in the environment;
- already widely available to the public for other use(s) and with a history of safe use under conditions posing the equivalent potential for exposure to humans and the environment;
- pesticidal action that is not the result of toxicity to the target organism (for example, products that work by attracting, repelling, desiccating or smothering pests); or
- unlikely to select for pest resist

Non-conventional pesticide active ingredients could include but are not limited to such things as food items, extracts, preservatives or additives (garlic powder, table salt, citric acid); plant extracts and oils (vegetable and mineral oils); commodity chemicals that have a number of non-pesticidal applications (acetic acid); and other natural materials (diatomaceous earth).

Microbial pesticide products are those that contain active ingredients that are naturally occurring or genetically modified microorganisms including bacteria, algae, fungi, protozoa, viruses, mycoplasma or rickettsiae, and related organisms. Macro organisms used for biological control such as predatory or parasitic insects/mites are excluded from the scope of this policy.

5.0 Exclusion of conventional pesticides

The policy to allow use of non-conventional and microbial pesticides registered for greenhouse uses in vertical farming systems DOES NOT apply to conventional pesticides. The use of conventional pesticides in vertical farming systems requires an application to the Minister to register a pest control product or amend the product's registration.