Health Canada Santé Canada

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Health Canada's Pest Management Regulatory Agency

Pesticide Use Information Framework Development: Towards a Strategic Approach

What We Heard Report from Government Partners and Stakeholders (2021-2023)

Protecting human health and the environment

Protéger la santé humaine et l'environnement

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1 Background

The Government of Canada is committed to ensuring that Health Canada's Pest Management Regulatory Agency (PMRA) continues to make timely, science-based decisions to support the safe and sustainable use of effective pesticide products in Canada with the support of Agriculture and Agri-Food Canada (AAFC), Environment and Climate Change Canada (ECCC) and other Federal, Provincial and Territorial (FPT) government partners.

Since August 2021, the PMRA has been undergoing a transformation process to strengthen its oversight and protection of human health and the environment and enhance transparency. Increasing the availability of and access to "real-world" pesticide use information furthers these objectives and helps improve pesticide review decisions. It also furthers Canadian's interest in accessing and understanding the scientific basis of the PMRA's decisions and how information including real-world data is being used in pesticide regulatory decision-making.

Pest management practices are evolving with the advancement of science and technology, making the inclusion of "real-world" pesticide use information even more important in the PMRA's pesticide reviews. The development of a Pesticide Use Information Framework (the Framework) will help ensure the PMRA's assessment of risk to human health and the environment, specifically pesticide exposure characterization, is informed by the real-world pesticide use information. It will also serve to inform value assessments, and development of risk management options.

A Pesticide Use Information Framework will provide transparency on how the PMRA intends to identify information needs, gather, manage and disclose pesticide use information in a systematic manner to support pesticide regulation in Canada. In doing so, the Framework will help address information gaps in support of robust and timely decisions, and to address health/environmental risks in a timely manner. It will ensure that Canadians have access to the tools they need for agriculture and other sectors, that are safe and effective, and increase access to information being used for regulatory decisions to further improve public understanding of regulatory decisions.

In addition, the Framework will support other Government of Canada initiatives such as the PMRA's National Water Monitoring Program, Canada's progress toward meeting Target 7 of the Kunming-Montreal Global Biodiversity Framework (GBF) and commitment to Open Data to foster greater transparency, integrity, accountability and public participation in government decision-making.

The Objectives of the Framework are to:

- renew and expand the evidence base for assessing risk and value of pesticides;
- ensure regulatory decisions on pesticides reflect current use practices;
- address risks in a timely manner;
- improve transparency and public access to pesticide use information;
- better inform decisions and increase public confidence; and,
- support other Government priorities (for example, GBF Target 7)

Pesticide use information is comprised of general use information and product specific usage information.

> **General pesticide use information** includes information on current crop/commodity production, site management practices, pesticide application information, pest management practices, application and postapplication activities and exposures of workers and bystanders. This information is not specific to a pesticide and can be used in many pesticide risk and value assessments. Incorporation of sex- and gender-based analysis plus analysis will be considered as part of the pesticide use information framework development.
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> **Product specific pesticide usage information** relates to how registered pesticides are used in practice in the real-world by end-users. For example, the portion of the crop or area treated, application rate, number of applications and intervals between applications, and timing of applications under real-world situations. The information is specific to an active ingredient or pesticide product and can only be used in risk or value assessments related to the pesticide or similar pesticides.

II Engagement approach

The engagement approach to inform the development of the PMRA's Pesticide Use Information Framework was intended to be as inclusive as possible. The PMRA sought feedback and input from federal/provincial/territorial (FPT) partners, academia, user groups, non-governmental organizations, and pesticide manufacturers through a number of engagement forums and mechanisms.

As a first step, the PMRA identified its information needs and worked with stakeholders and partners to identify sources of pesticide use information and potential access strategies. Based on this initial assessment and prioritization, the focus turned to agricultural crop production uses, with non-crop uses to be addressed subsequently. The initial non-crop sectors included forestry and woodlot, livestock, and structural and general outdoor uses.

Separate "kick-off" meetings with stakeholders (user groups, non-government organizations, manufacturers, academics) and FPT partners were held, leading to the establishment of Technical Working Groups (TWG) for stakeholders and FPT partners. The PMRA shared sector-specific matrices or "worksheets" based on its assessment of information needs and their relative priorities to serve as basis for the TWG meetings and discussions that followed.

The sector-specific TWG meetings focused on identifying and assessing information sources and access strategies. Additionally, bilateral discussions with specific sectors were held as appropriate, to adequately address considerations or circumstances that were specific to the sector. These meetings were supplemented by a multi-stakeholder session in Spring 2023 to focus on common issues across sectors, and, the strategic elements arising from the sector-specific discussions, as well as discussions on program

design considerations (policies and protocols; Information technology (IT) related infrastructure; governance) and next steps.

A wide range of stakeholders and partners representing FPT, academia, user groups, non-governmental organizations (in other words, environmental advocacy organizations, health advocacy organizations), pesticide manufacturers and user groups in the following sectors were engaged:

- Horticultural sector (fruits & vegetables)
- Ornamental horticulture sector
- Grains sector
- Oilseeds sector
- Pulses sector
- Livestock sector
- Forestry sector
- Structural sector

TWG participants are listed in Appendix A and B.

III Summary of What We Heard

During the stakeholder engagement sessions and TWG meetings, several aspects of strategic elements regarding a proposed pesticide use information framework were explored.

While the following represent high-level points expressed and perspective provided during these discussions, it should not be considered a verbatim recitation of feedback and input received.

1 Themes across sectors

Need for pesticide use information: Participants confirmed the importance of "real-world" pesticide use information in regulatory decisions. There was general support for a pesticide use information framework with considerations, and the need for a systematic collection of pesticide use information. Stakeholders also expressed interest in expanding to other sectors (for example, aquatic uses).

Information gathering and data sources: Participants noted stakeholder fatigue with the multiple information requests and surveys, and suggested to leverage existing relationships, published literature and databases.

To that end, participants identified several sources of pesticide use information that the PMRA could leverage or access to renew and expand its evidence base. They include:

a) published information (production guides, sector profiles, codes of practice, National Forestry database, existing surveys, research publications, etc.);
b) proprietary data from third-party providers, food safety certification processes, processors, researchers, seed companies, pesticide manufacturers, retailers, training programs, veterinarians;

c) expertise from other federal (for example, Canadian Forestry Service, Canadian Food Inspection Agency, Public Health Agency of Canada, Statistics Canada and Agriculture and Agri-Food Canada) and provincial departments (for example, Provincial extension and sector experts, licensing/permitting programs) and municipalities; and
d) sales data, which are required to be reported to the PMRA.

Information access strategies: Participants suggested a number of strategies that could be used to access and address data needs, such as:

a) setting up task forces or networks of experts to work on specific crops/sites or new technologies (for example, new production methods);
b) commissioning custom surveys;
c) leveraging information already in the PMRA's possession from re-evaluations and submissions for new products/uses; and
d) using Memorandums of Understanding (MOUs) with key partners, as appropriate, to facilitate the collection and disclosure of pesticide use information.

For newer technologies (for example, drones and vertical farming) participants noted the importance of gathering use information in their early stages of development. This will facilitate regulatory agility to address emerging changes in specific sectors.

Timing and frequency of information requests: Participants were generally in agreement that consideration should be given to the timing and frequency of information gathering requests through custom surveys or otherwise, being mindful of peak sector activities (for example, growing season for crops and peak timing for non-crop sectors).

Participants agreed that surveys for pesticide use information were needed and recommended that such surveys be commissioned during periods of low activity within the target sector, typically fall to winter, to help ensure stakeholders and partners have the capacity to participate in the information gathering activities.

Participants also indicated that product specific usage information tends to be more time sensitive and could be impacted by various factors such as pest pressures, the availability of cost-effective alternative pest control products in the marketplace and user preference. There was general support for the collection of general use information every five years as suggested by the PMRA. However, concerns were raised regarding the frequency of the proposed collection schedule for product specific usage information (every two years), due to stakeholder fatigue.

User participation and information collection: Participants indicated that user-level information is available. Strategies to collaborate with users for information collection will be key, and information should be collected in a manner that protects personal information, confidentiality and information of business value.

Participants supported collection of pesticide use information by third parties (for example, service providers), while noting the importance of aggregating the information collected. Privacy and confidentiality concerns and previous history with regulatory

agencies were also identified as key considerations that will impact user participation. For example, for certain users, their only experience with a regulatory agency may have been from a compliance and enforcement perspective which may provide disincentive to provide information. To mitigate this risk, a number of key benefits for the sectors to provide pesticide use information to the PMRA were discussed (for example, maintaining safe and effective product uses, identification of practical mitigation measures and to improve public confidence). Participants noted that it would be important for the PMRA to highlight these and to explain them in plain language to increase user participation.

Given the current intent is for this information to be collected on a voluntary basis, which may result in low user participation, participants suggested that incentives be considered to increase participation, such as monetary compensation. Other suggestions to increase participation rates included limiting the number of survey questions, considering in-person engagement and ensuring appropriate timing for the engagement. Building trust through the mutual sharing of information was also identified as an important tool for improved user participation.

Lastly, some sector stakeholders were of the view that participation rates and quality of the information received would be improved if the reporting of pesticide use information was made mandatory.

Expected use of gathered pesticide use information: Participants requested clarity on how the PMRA would use the newly obtained pesticide use information in pesticide reviews, as users expressed concerns that the information collected would be used for compliance purposes or to support the strategy for the reduction of pesticide risk under Target 7 of the GBF.

Participants indicated that it would be important for building trust and collaboration for the PMRA to be clear on how the collected information would be verified and used in decision making, internally managed and disclosed publicly. Participants also asked that the PMRA clarify the value of the collection of pesticide use information that is not directly linked to a specific regulatory decision.

In-person meetings such as conferences and field tours may help to build trust and reduce the concerns related to compliance as there will be direct discussions and interactions with PMRA staff. Participation may be enhanced by explaining how providing this information would help the information provider's needs.

Lastly, participants noted the need for a digital platform to collect, manage and share pesticide use information under the Framework.

Data quality: Participants highlighted the importance of the quality of information collected, and indicated that quality standards for information would need to be identified, particularly regarding qualitative (in other words, general pesticide use information) versus quantitative (in other words, product specific usage information which needs to be statistically valid) information.

There was general agreement among participants that information needs to be collected in a standardized fashion to ensure quality, while recognizing that regional differences must be considered when seeking general use and product specific usage information. Furthermore, participants noted the need for using terminology that would be recognizable to users, and encouraged the PMRA to collaborate with stakeholders and FPT partners to develop common definitions to accurately understand and respond to information gathering initiatives.

Concerns were raised that surveys may result in under or overreporting pesticide usage information. Participants indicated the need for guidance accompanying the release of any information to address information that may be perceived as outliers. Certain participants noted the need for the pesticide use information to be reviewed by those providing the information to confirm its accuracy before it is used by the PMRA or disclosed in accordance with PMRA transparency objectives.

Governance: Participants agreed on the need for adequate governance and that sector-based working groups could be engaged in developing the governance for the Framework. In their view, such governance should determine the appropriate level and contact point on sector-based issues (in other words, whether directly with stakeholders, or through their associations) as well as other common mechanisms (such as a program-specific forum) to address broader issues. Participants also mentioned that the governance should set out when and under which circumstances stakeholders would be provided with access to the pesticide use information collected and ability to confirm its accuracy prior to being used by the PMRA or disclosed more broadly.

Information sharing: In general, participants supported sharing of pesticide use information that would be collected, provided that confidentiality and privacy are protected. However, certain stakeholder groups identified concerns related to sharing information on a proactive basis and made the point that the primary purpose for collecting such information should be to meet the PMRA's needs for risk assessments and support its decision-making process, and not for the purpose of sharing the information. Participants identified the importance of data aggregation to respect privacy and confidentiality when sharing pesticide use information more broadly.

Moreover, participants highlighted the need for the PMRA to provide context when publishing pesticide use information to minimize misinformation and misinterpretation. In addition, the specific information needs of different groups should be considered when sharing and publishing pesticide use information (for example, public may be more interested in general information; research community would be more interested in detailed information).

2 Sector specific high-level points raised

Ornamentals sector:

- The need for "real-world" pesticide exposure information for use in pesticide regulatory decision was highlighted.

- Pesticide use information needs are diverse and dependent on the type of production (in greenhouse or outdoors).
- Pesticide use information sources are limited.
- Targeted pesticide use information requests (for example, specific information on a particular crop or a specific pesticide) are an appropriate approach to obtaining pesticide use information in the ornamental sector.

Horticultural sector (fruits & vegetables):

- Pesticide use information is available at the grower level.
- Pesticide use information availability by crop will vary based on industry size, level of organization and region.
- Fruit and Vegetable Growers of Canada expressed willingness to facilitate pesticide use information gathering through collaboration between data collectors, provincial grower organizations and growers.

Grains sectors:

- Pesticide use information used to inform water monitoring needs to be at a highly granular level (for example, field level or watershed level).
- Differences among small and large farming systems need to be considered.
- Privacy and confidentiality need to be respected while releasing pesticide use information.

Livestock sector:

- Livestock sector (for example, apiculture, cattle, chicken, hogs, sheep) is diverse.
- Livestock production may consist of a blend of livestock and crops, as well as structural treatments.
- Pesticide applications in the crop sector can also impact feed (grain, forage, straw) for livestock.
- Limited pesticide use information is available for the livestock sector. Participants also indicated insufficient pesticide use information and knowledge for consideration in pesticide reviews at the PMRA.
- Focus groups, and surveys are valuable for understanding and verifying general pesticide use information.

Forestry sector:

- Few pesticide products are used in the forestry sector.
- Pesticide use information on forestry activities on crown land is collected from the provinces/territories and published by the Canadian Forest Service (for example, National Forestry Database; Statistics Canada).
- It will be more challenging to obtain information on forestry use on private land.

Structural sector:

- The sector is complex and variable with regional differences observed between municipalities.

- Pesticide use information would be difficult to obtain, especially for domestic class products used by the public.
- It may be challenging for stakeholders to compile pesticide use information due to capacity (for example, electronic versus paper; limited human resources).
- Different approaches for the collection of information (for example, surveys) are needed for products that are used by the public and for those used by commercial pest control operators. Engaging retailers through conferences or meetings could be considered to help with gathering pesticide use information.
- Reporting may need to be mandatory to obtain adequate level of response rate and accurate information.
- Vulnerable communities and climate change needs to be taken into consideration.

Pesticide manufacturers:

- Recommend that product specific pesticide usage information be shared with pesticide manufacturers to confirm the accuracy of information prior to its use by the PMRA.
- A tiered approach with respect to pesticide use information should be considered in which product specific use information would be requested only once the draft risk assessment was completed and refinements are required.
- Concerns were raised about generating risk assessments based on survey data if grower or user input is considered without adequate vetting as it could contribute to a dataset that gives undue weight to outliers and erroneous assumptions.
- A robust and easy to use search engine should be available to enable stakeholders to retrieve pesticide use information using an electronic portal/database.

Non-government organizations and academia:

- Collecting product specific usage information every two years or general use information every five years may be infrequent to produce meaningful results.
- Expressed an interest in seeing detailed pesticide use information to be collected and shared.

Acknowledgement and next steps

The PMRA appreciates the feedback, input, and collaboration received from stakeholders and FPT partners through the technical working group and other engagement forums. The information and advice received during these discussions are being considered as the PMRA finalizes the draft Pesticide Use Information Framework that is planned for consultation in June 2024. FPT partners and stakeholders will continue to be engaged throughout this process.

Appendix A Technical Working Group (TWG) participants (Crop sectors)

Federal and Provincial Partners:

Agriculture and Agri-Food Canada

Environment and Climate Change Canada

Government of Alberta

Government of British Columbia

Government of Manitoba

Government of Newfoundland

Government of Nova Scotia

Government of Prince Edward Island

Government of Saskatchewan

Ontario Ministry of Agriculture, Food and Rural Affairs

Ministère de l'Agriculture, des Pêcheries et de l'Alimentation

User groups:

Alberta Pulse

Canadian Canola Grower's Association

Canada Grains Council

Canadian National Landscape Association

Canola Council of Canada

Flowers Canada

Fruit and Vegetable Growers of Canada

Grain Farmers of Ontario

L' Union des producteurs agricoles (UPA)

Pulse Canada

Pesticide manufacturers:

Corteva

Dow

Nufarm

Syngenta

CropLife Canada

Non-governmental organizations:

EcoJustice

Academia:

University of Regina

University of Saskatchewan

Universite de Sherbrooke

Appendix B Technical Working Group (TWG) participants (non-Crop sectors)

FPT partners:

- Canadian Food Inspection Agency
- Natural Resources Canada – Canadian Forestry Services
- Public Health Agency of Canada
- Agriculture and Agri-Food Canada
- British Columbia Ministry of Environment and Climate Change Strategy
- British Columbia Ministry of Transportation and Infrastructure
- Ontario Ministry of Environment, Conservation and Parks
- Ontario Ministry of Agriculture, Food and Rural Affairs
- Alberta Forestry and Parks
- Saskatchewan Ministry of Agriculture

User groups:

- Canadian Pest Management Association
- Canadian Sheep Federation
- Chicken Farmers of Canada
- Canadian Cattle Association
- Dairy Farmers of Canada
- National Cattle Feeders Association
- Leafcutter Bees (Canadian Cocoon Testing Center, Forage Genetics International)

Pesticide industry:

- Valent Biosciences
- Corteva Agriscience Canada
- Canadian Association of Agri-Retailers
- TSG Consulting
- SC Johnson
- Syngenta

Non-governmental organizations:

- Canadian Environmental Law Association
- Wilderness Committee
- Environmental Defence
- Prevent Cancer Now

Academia:

- University of Lethbridge (on behalf of Canadian Honey Council)