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Pesticide Free? Oui!

2011 progress report: A comparison of provincial cosmetic pesticide bans

CREDITS

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1. Introduction

Since publication of our 2008 report Pesticide Free? Oui! An analysis of Quebec's Pesticides Management Code and recommendations for effective provincial policy (Équiterre and David Suzuki Foundation), several Canadian provinces have followed Quebec's lead and have banned the cosmetic use of pesticides. While provincial cosmetic pesticide bans generally share a common purpose – the protection of health and/or the environment from needless exposure to pesticides – the approach varies considerably from province to province. In this update, we present a comparison of current provincial actions to ban cosmetic pesticides and identify the most promising approaches. Building on the findings of our earlier report, this analysis aims to bring to the attention of decision-makers the lessons learned from recent policy innovation in this arena and highlight the best available models. Our conclusions are particularly relevant for Quebec, which led the way with the first provincial ban on lawn pesticides in 2003 but has now fallen behind other provinces, and for British Columbia, where the government is considering the results of a public consultation that favoured a provincial ban – as well as for other provinces that may consider adopting or strengthening prohibitions on cosmetic pesticides.

The first section of this report briefly presents the approaches adopted by the five Canadian provinces that currently restrict the use and sale of cosmetic pesticides: Quebec, Ontario, New Brunswick, Nova Scotia, and Prince Edward Island, as well as Alberta's more limited restriction on pesticide/fertilizer mixtures. We also review the process to date in British Columbia. We then assess the strengths and weaknesses of the different provincial frameworks and highlight the best models, corresponding to the recommendations made in our 2008 report.

2. Summary of provincial action on cosmetic pesticides

Ontario

The province adopted the Cosmetic Pesticides Ban Act in June 2008 and corresponding changes to the pesticide regulation (Ontario Regulation 63/09) took effect on April 22, 2009. The regulation prohibits the use of 96 active ingredients in cosmetic pesticides for public and private lawns and gardens, as well as the sale of 172 products containing these chemicals. An additional 103 "mixed use" products are subject to new retail restrictions. These products contain active ingredients that are banned for cosmetic use on lawns and gardens but can be used in other products for purposes beyond the scope of the ban (e.g., indoor insect control) or that are permitted under an exemption for the "promotion of public health and safety." The latter allows pesticides containing the active ingredients glyphosate and glufosinate, which are otherwise prohibited for cosmetic purposes, to be used to control plants that are poisonous to the touch, such as poison ivy. There is no requirement for third-party certification at the point of sale to verify that the pesticides are actually being purchased for an exempted use. However, self-service retail access to mixed-use products (which are generally banned for cosmetic use but still permitted for use in certain circumstances) is prohibited and store owners are required to provide information about the cosmetic pesticide ban to customers who purchase them.

The exemption for the "promotion of public health and safety" also permits use of pesticides to control animals that bite or sting, are venomous, or carry disease (including wasps, mosquitoes and ticks) and to control plants, fungi or animals that affect public works and other buildings and structures. In addition, there is a limited exemption for arboriculture. In this latter case, the written opinion of a specialist must be obtained, stating that the pesticide is necessary to maintain the health of the tree. Finally, the Ministry of Natural Resources may authorize the use of pesticides to control invasive species, to benefit a species of flora or fauna that is native to Ontario or to protect or restore a rare ecosystem. Although there are restrictions on which pesticides can be used under the exemption for plants that are poisonous to the touch (e.g., only glyphosate and glufosinate products), this is not the case for other exempted uses.

Golf courses are generally exempt from the Ontario ban, but to qualify for this exemption they must be certified in Integrated Pest Management and must submit annual reports

disclosing the amount of each pesticide used along with plans to minimize pesticide use. The reports must be made available to the public, presented at an annual public meeting and posted online (as of 2012).

The Ontario Ministry of the Environment maintains guidelines for classifying pesticides under the Cosmetic Pesticides Ban Act. Only substances that meet proposed low-risk criteria (see below) and those identified as reduced-risk biopesticides are allowed for cosmetic use; others will be added to the list of banned active ingredients. The same classification system applies for any new pesticide registered by the Pest Management Regulatory Agency (PMRA).

Low-risk criteria[1]

As proposed by the PMRA, lower-risk pesticides have some or all of the following characteristics:

- They have a non-toxic mode of action.
- They are of low toxicity to organisms the product is not targeting.
- They do not persist in the environment.
- The product is used in ways that do not cause significant exposure. For example, the product is premixed or it is applied in a closed system, reducing human and environmental exposure.
- They have been widely available to the public for other uses for some time

The Ontario provincial ban superseded municipal pesticide bylaws. This means that municipalities are not able to adopt tougher restrictions on pesticide use and do not have a clear role in enforcement.

[1] Source: Government of Ontario, Feb. 24, 2009. Pesticide Classification Guidelines for Ontario. Available at: www.ene.gov.on.ca/environment/en/resources/STD01_076412 (accessed April 14, 2011).

Quebec

Introduced in April 2003, the Quebec Pesticides Management Code addresses the use and sale of lawn pesticides. The regulation targets 20 active ingredients that are classified as carcinogens (including probable and possible carcinogens) by at least one of the following specified reference agencies: the International Agency for Research on Cancer (IARC), the U.S. Environmental Protection Agency, the U.S. National Toxicology Program, the California Environmental Protection Agency and the European Union. These 20 active ingredients are found in approximately 200 lawn pesticides, which are now banned.

In determining which active ingredients would be banned, the Quebec Ministry of Environment (now renamed ministère du Développement durable, de l'Environnement et des Parcs – MDDEP) initially considered other chronic effects of concern, such as endocrine disruption. In the end, these criteria were not applied because at the time there were no established reference lists for chronic effects other than cancer.[2] (The European Union's priority list of suspected endocrine disruptors was developed more recently.)

In principle, any active ingredient later classified as a carcinogen or endocrine disruptor should be added to the list of banned pesticides, according to the document that outlines the methodology the department used to develop the initial list. However, the Pesticides Management Code itself does not specify any requirement for the minister to update the list of banned pesticides, and, in fact, it has remained unchanged since the Code was adopted in 2003.

Implementation of the Code was phased in over three years. The ban on the use of pesticides on public and municipal lawns came into effect first, in April 2003. Next, the sales ban on domestic-use pesticide-fertilizer mixtures and pesticide combination products (e.g., herbicide-insecticide mixtures) took effect in April 2004. Retail display restrictions prohibiting self-service customer access to domestic pesticides containing the banned active ingredients have been in force since April 2005. Finally, the sale of all domestic pesticides containing the banned active ingredients and the use of these products on private and commercial lawns were banned in April 2006.

The Code further restricts pesticide use inside and outside places frequented by children, such as early childhood centres, daycare centres, child drop-in centres, kindergartens and family-run child-care facilities, as well as preschools, elementary schools and high schools.

[2] Source: Gouvernement du Québec, ministère du Développement durable, de l'Environnement et des Parcs. "Code de gestion des pesticides. Les faits saillants". Available at: www.mddep.gouv.qc.ca/pesticides/permis/code-gestion/index.htm (accessed March 24, 2011).

Only biopesticides or 14 active ingredients considered least likely to have any toxic effects (see the box below) can be applied inside or outside these establishments. This list was developed based on parallel requirements in the U.S. School Environmental Protection Act.

Active ingredients permitted for use inside and outside of early childhood centres, elementary schools and high schools

Acetamiprid
Boric acid
Borax
Silicon dioxide (diatomaceous earth)
Methoprene
Octaborate disodium tetrahydrate
Ferric phosphate
Insecticidal soap
Spinosad
Acetic acid
Mixture of capric and pelargonic
Herbicidal soap
Sulphur
Calcium sulphide or calcium polysulphide
Biopesticides

Municipalities must adhere to the Pesticides Management Code but may also adopt more stringent restrictions on pesticide use.

Golf courses are not subject the Code but are required to submit pesticide-use reduction plans every three years (as of April 2006).

Nova Scotia

The Non-Essential Pesticides Control Act took effect in Nova Scotia on April 1, 2011. This law prohibits the cosmetic use of pesticides on lawns and will extend to trees, shrubs and ornamental flowers on April 1, 2012. The accompanying "List of Allowable Pesticides Regulations" sets out active ingredients that are considered to pose a lower risk to human health and the environment. Nova Scotia's list of allowable pesticides is based on Ontario's classification, as well as the Canadian General Standards Board's list of allowed substances in Organic Production Systems. Any product containing active ingredients not on the list of allowable pesticides is prohibited.

The ban applies to residential, commercial, government and institutional properties, including hospitals, long-term care facilities, schools, parks and recreational infrastructures. It does not apply to golf courses or vegetable gardens.

There are also exemptions for the use of pesticides in specific circumstances. Pesticides containing the active ingredient glyphosate, which are generally prohibited, can be used to control plants that are poisonous to the touch, invasive plant species and plants that may damage buildings. There is also a broader exemption for the use of pesticides to control animals (including insects) that bite, sting, are venomous or carry diseases; fungi and animal species that may damage buildings; and invasive species other than plants; and for the use of pesticides injected into outdoor trees. Although there are restrictions on which pesticides can be used under the first set of exemptions (e.g., only glyphosate products), this is not the case for the latter exempted uses. Neither is there any requirement for third-party certification at the point of sale to verify that the pesticides are actually being purchased for an exempted use. As in Ontario, retail display requirements prohibit self-service consumer access to mixed-use pesticides (i.e., products generally prohibited for cosmetic use but allowed under certain exemptions). Retailers must also supply customers with information concerning the legal exemptions allowing for the use of the pesticides.

New Brunswick and Prince Edward Island

Using existing legal authorities under the 1974 Pesticides Control Act, the New Brunswick government banned the use and sale of pesticides containing 2,4-dichlorophenoxyacetic acid (2,4-D) as of December 16, 2009. The ban also applies to pesticides that the government considers to be misused or overused: combination products (pesticides-fertilizers mixtures), products using spray cartridges designed to be applied with a garden hose, concentrated products requiring preparation (e.g., mixing, dilution or handling) before application, and granulated products for spraying. In all, the government banned the retail sale and use of more than 200 lawn pesticides.

Staff from lawn-care companies must register in an Integrated Pest Management (IPM) program approved by the New Brunswick Ministry of Environment to purchase and apply commercial lawn pesticides, other than 2,4-D products (which are prohibited). To reduce blanket treatments in favour of targeted spot treatments of problem areas,

pesticides can only be applied on up to 50 per cent of a lawn, once per season. An exemption is permitted for blanket treatments of so-called insect infestations if a permit amendment from the Ministry of Environment is obtained.

Golf courses are generally not subject to the new restrictions provided they obtain IPM accreditation.

The provincial guidelines do not prevent the adoption of regulations at the municipal level.

The government pledged to undertake a public review of the Pesticides Control Act[3] but no process has been announced yet.

In April 1, 2010, Prince Edward Island amended its rules to match those in NewBrunswick.

Alberta

In Alberta, a ban on the use and sale of fertilizer-herbicide mixtures (so-called "weed and feed" products, most of which contain 2,4-D) took effect on January 1, 2010. The ban does not extend to other products containing 2,4-D. "Professional turf managers" (e.g., golf courses) are also exempt.

British Columbia

In early 2010, the B.C. Ministry of Environment consulted the public on "new statutory protections to further safeguard our environment from cosmetic chemical pesticides." The Ministry of Environment received more than 8,000 submissions (including petition signatures), the vast majority of which were in support of cosmetic pesticide legislation. But the government is sitting on the results of the consultation and has yet to announce a decision.

[3] Source : Government of New Brunswick, June 18, 2009. Province introduces lawn care pesticide ban. Available at: www.gnb.ca/cnb/news/env/2009e0865ev.htm (accessed January 26 2011).

3. Strengths and weaknesses of provincial policy frameworks for cosmetic pesticides

On the basis of our analysis of Quebec's Pesticides Management Code, our 2008 report Pesticide Free? Oui! made the following seven recommendations for effective provincial cosmetic pesticide bans:

1. Adopt the precautionary principle as the guiding principle.
2. Structure the ban in reference to a "white list" of reduced-risk products and biopesticides authorized for sale and use.
3. Ensure that the provincewide ban is sufficiently stringent so that its effectiveness does not hinge on complementary municipal bylaws.
4. Prohibit all cosmetic use of pesticides in landscaping – not only lawn applications.
5. Provide citizens with practical tools and encourage them to adopt new standards for their lawns.
6. Plan a thorough monitoring and enforcement program.
7. Fund research and development of alternatives to pesticides.

Our review of subsequent developments in other provinces indicates that regulatory frameworks in Ontario and Nova Scotia are most consistent with these recommendations and offer the best models for protecting human health and the environment from cosmetic pesticides – although there is still room for improvement.

The policies in these two provinces are the most comprehensive, in that they apply beyond lawns to other aspects of landscaping and prohibit a large number of pesticides. In both Ontario and Nova Scotia, the cosmetic pesticide ban is oriented around a credible list of lower-risk products permitted for use in public and private areas.

However, it is important to note that exemptions permit the use of pesticides that are generally banned in Ontario and Nova Scotia, and these exempted uses are not always well-controlled. There is no requirement for third-party certification at the point of sale to verify that the pesticides are actually being purchased for an exempted use. Nova Scotia's uncontrolled exemption for the use of pesticides to control invasive species other than plants, in particular, opens a significant loophole for the sale and use of insecticides that are not on the list of allowable pesticides. Although there are at least restrictions on which

pesticides can be used under some exemptions (e.g., the exemption for the use of pesticides to control plants that are poisonous to the touch extends only to glyphosate products), there is no parallel restriction in the case of the exemption for the of control invasive species other than plants.

To the extent that provincial bans on the cosmetic use of pesticides allow for exemptions, permits should be required -- as is the case in New Brunswick when a company seeks to apply pesticides to more than 50 per cent of a lawn to treat a so-called "insect infestation." Ontario also requires the approval of specified authorities in the case of certain exempted uses; for instance, to control invasive species and to maintain the health of a tree. When an exemption is approved, residents of the surrounding area should be advised of the planned pesticide application and warning signs should be required on the perimeter of the pesticide application area for a specified time before and after the treatment. Retailers should also be required to maintain a record of pesticides sales for exempted uses in order to monitor and address possible abuse. In addition, pesticides sold under exemptions should be packaged in single-use containers.

The restrictions on pesticide use in places frequented by children, under Quebec's Pesticides Management Code, currently represent the best model in terms of a comprehensive ban with only a few limited exemptions. However, this section of the Code applies only to early childhood centres, daycare centres, preschools, and schools, even though these are not the only places where children could be exposed to pesticides.

In contrast to the Ontario and Nova Scotia regulations, cosmetic pesticide bans in Quebec (apart from more stringent provisions for areas frequented by children), New Brunswick and Alberta only apply to lawns and exclude other elements of landscaping. As a result, active ingredients banned for use on lawns may still be available in products marketed for cosmetic use on gardens, trees and shrubs.

Among the provinces with more comprehensive cosmetic pesticide bans, New Brunswick's approach is the most limited, given that only one active ingredient is banned, and only in lawn pesticides. Alberta's approach, which bans only herbicide-fertilizer mixtures, is even weaker.

A mechanism to classify new pesticides that appear on the market is important to prevent provincial bans from becoming outdated. In this respect, Ontario offers the best model. The classification of new active ingredients based on lower-risk criteria ensures that the lists of permitted and banned products are kept up to date, which may also help to promote the development of new, lower-risk products. Nova Scotia's approach is also noteworthy in this

regard. Because the Nova Scotia ban is oriented around a set list of allowed pesticides, any new active ingredient will be automatically banned, unless the "List of Allowable Pesticides Regulations" is revised. A caveat for Ontario: the lower-risk criteria are not specified in the law or regulation, but are included only in guidelines that could easily be weakened.

No province prohibits the cosmetic use of pesticides indoors (except for the restrictions on pesticide use in areas frequented by children under Quebec's Pesticides Management Code). This is an important area for improvement. Logically, cosmetic pesticide bans should extend to indoor applications, such as pesticides used on houseplants.

All provinces reviewed currently exempt golf courses from cosmetic pesticide bans, although most require golf courses to meet reporting and/or certification requirements. Canadian provinces can look to Denmark's example and extend the scope of cosmetic pesticide bans to include golf courses (see box below).

Denmark will eliminate pesticides from golf courses[4]

The Danish government has announced an agreement that aims to phase out pesticide use on golf courses throughout the country and increase education regarding natural solutions and alternative methods. This multiparty agreement replaces an earlier agreement, reached in 2005, that called for voluntary reductions in pesticide use but delivered unsatisfactory results. The new agreement includes binding regulations and will allow only lower-risk pesticides to be used. Risk factors will be determined using a benchmarking system based on the health and environment properties of the individual pesticides. The agreement also calls for monitoring of golf course pesticide consumption and usage. The new regulations will be initiated as an element of Denmark's implementation of the European Union framework directive on sustainable application of pesticides, which requires member states to minimize or ban pesticide use in areas used by the general public, including sports grounds and public parks.

[4] Source : Beyond Pesticides, February 2011, "Danish Government Agrees to Reduce Pesticides on Golf Courses". Available at: www.beyondpesticides.org/dailynewsblog/?p=4971 (accessed March 24, 2011).

Allow municipalities to go beyond the provincial regulations and promote a coordinated approach

The Ontario and Nova Scotia bans do not allow municipalities to further restrict pesticide use within their territory (other than the City of Halifax, Nova Scotia). Quebec allows municipalities to go beyond the provincial ban, but Quebec's regulation is less stringent than those of Ontario and Nova Scotia. From our perspective, the provincial regulatory framework must be as strong as possible to protect human health and the environment throughout the province. Municipalities should also retain the power to innovate to further restrict pesticide use beyond the requirements of the provincial ban. It is also important to establish a coordinated approach for inspection and enforcement.

Enforcement, awareness-raising and research and development

A comparison of public-awareness programs and enforcement activities in the various provinces is beyond the scope of this analysis. In most cases, such an assessment would be premature because provincial cosmetic pesticide policies have only recently been introduced, and in the case of Quebec, our observations have already been noted in our 2008 report. In general, however, the following considerations can help to ensure effective implementation:

- It is important to conduct unscheduled inspections to ensure full compliance with the ban.
- It is also important for governments to evaluate and report on the status of implementation and enforcement activities, including the number and type of violations and compliance trends over time.
- With respect to public awareness, it's important to show citizens that alternatives to pesticides work. Conferences, lectures, workshops, demonstration sites and television advertising can help to communicate this message and persuade citizens to adopt new gardening techniques.
- Public education campaigns must also seek to adjust popular perceptions of what constitutes a "beautiful lawn" and promote understanding of health and environmental considerations.
- Governments should promote research and development projects in the area of lower-risk products.

Summary table: Comparison of key elements of provincial cosmetic pesticide bans

Element/Province	Ontario	Quebec	N-S	N-B/PEI	Alberta
White list	✓	✓*	✓	✗	✗
Scope extends beyond lawns	✓	✗	✓	✗	✗
Large number of pesticides banned	✓**	✗	✓**	✗	✗
Covers new active ingredients	✓	✗	✓	**NA**	**NA**
Includes golf courses	✗	✗	✗	✗	✗
Addresses indoor pesticide use	✗	✓*	✗	✗	✗
Municipalities retain the power to further restrict pesticide use	✗	✓	✗	✓	✓

* Only for areas frequented by children.
**But with exemptions that are not always well-controlled.

4. Conclusion

On the basis of our analysis of Quebec's Pesticides Management Code, our 2008 report Pesticide Free? Oui! made recommendations to optimize provincial frameworks for cosmetic pesticide bans. Our review of subsequent developments in other provinces indicates that regulatory frameworks in Ontario and Nova Scotia are most consistent with these recommendations and offer the best model for protecting human health and the environment from cosmetic pesticides, although there is still room for improvement.

We underscore the importance of:

- Extending a ban to all aspects of landscaping in public and private areas;
- Structuring the ban in reference to a credible list of permitted lower-risk ingredients and prohibiting the sale and use of all other pesticides;
- Providing a mechanism to classify new active ingredients;
- Requiring a permit for pesticide use under exemptions. Exemptions should only be permitted if necessary to protect public health and safety;

Golf courses are currently excluded from the regulations in all provinces, which should be corrected.

It is important that the provincial framework support municipalities wishing to further restrict pesticide use beyond the requirements of the provincial ban, and ensure coordination between provincial and municipal governments for effective implementation.

Although beyond the scope of this analysis, we also stress the importance of establishing an effective monitoring and enforcement program, including unscheduled inspections and other enforcement activities, as well as promoting greater public awareness of the ban and alternatives to pesticides.

We hope that policy-makers will draw on this analysis of lessons learned and undertake to improve on the best available models. Our conclusions are particularly relevant for Quebec, which led the way with the first provincial ban on lawn pesticides in 2003 but has now lost its leadership position to other provinces, and for British Columbia, where the government is considering the results of a public consultation that favoured a provincial ban, as well as for other provinces that may consider adopting or strengthening prohibitions on cosmetic pesticides.

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