

## Ecological Ornamental Horticulture: Getting to Know Consumers to Guide their Decision-making

Study on factors leading consumers to choose more environmentally friendly ornamental horticulture products and services.





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## Introduction

The objective of the research project is twofold: 1) To identify the various factors that favour and discourage the consumption of more environmentally friendly ornamental horticulture products and services; and 2) to determine the most effective factors that lead consumers to choose these products and services.

### Note to reader:

By ornamental horticulture products, we mean inputs (fertilizers, soil conditioners, soil, pesticides, etc.) and plant life (plants, flowers, trees or shrubs, seeds, etc.).

Since April 3, 2003, the *Pesticides Management Code*, a provincial regulation, has progressively come into effect in Quebec. Starting in April 2006, the Code has banned the sale of 20 active ingredients considered to be the most harmful to human health and the environment<sup>1</sup>, and prohibited their use on private, commercial, public, parapublic, and municipal lawns. Nonetheless, over the past several years, ornamental horticulture has grown into a large market, which is greatly dependent on these now-banned products. In Quebec, the ornamental horticulture industry has been faced with the need to adopt more environmentally friendly practices. However, for the time being, green horticultural products remain marginal or, at best, occupy a niche market.

This research project includes a **review of past studies**. The scope of our actions on environmentally friendly ornamental horticulture and alternatives to pesticides reveals how few studies exist on the subject and how difficult it is to obtain

recent statistical data. The research project also includes a **Canada-wide survey** of 1,311 gardeners<sup>2</sup>. Lastly, a **series of interviews with commercial and municipal players** allowed us to verify their perceptions of consumer habits regarding more environmentally friendly ornamental horticultural products and services.

These data identified **solutions, recommendations, and measures** to equip the industry with tools for its product and service offer. These recommendations are intended for commercial players and consumers themselves, but also for governments and organizations so as to encourage them to take tangible steps towards more environmentally friendly ornamental horticulture products and services.

For more than a decade, educational efforts have encouraged consumers to adopt green ornamental horticulture practices. Then, in 2003, the *Pesticides Management Code* came into effect in Quebec. It is the first legislation of its kind in North America to ban the sale and widespread use of products in ornamental horticulture, including 2,4-D, a herbicide widely used in lawn maintenance. Consumers are therefore faced with a situation in which they must re-evaluate their gardening habits and, especially, find new and alternative solutions.

Since horticulture is a popular pastime in Quebec, this issue affects a large section of the population. According to a 2005



<sup>1</sup>Government of Quebec. 2008, *Pesticides Management Code*, <http://www.menv.gouv.qc.ca/pesticides/permis-en/code-gestion-en/index.htm>. Site consulted February 28, 2008.

<sup>2</sup>Those surveyed met the following criteria:

- Garden. By *gardening* we mean lawn maintenance and landscaping with plants and flowers, but not vegetable gardens.
- Have space to garden, be it at their main or second residence.



study carried out by the round table Table filière de l'horticulture ornementale and jointly funded by FIHOQ, the Quebec-based interdisciplinary federation for ornamental horticulture, and MAPAQ, Quebec's department of agriculture, 51.7 per cent of households that used ornamental horticulture products were more aware of the environment in 2005 than in 2004. In all, 93 per cent of consumers claimed to be aware of environmental issues<sup>3</sup>. We also see that consumers are more open to green horticulture products as well as to an increase in professional landscaping services' use of alternatives to pesticides (natural fertilizers, biopesticides, weeding, etc.) as a way of meeting new needs.

Green ornamental horticulture products have long been of no significance though they now take up more and more room on distributor and garden centre shelves. At present, there is no way to measure this development, though our activities with citizens demonstrate that, despite interest for green products, consumers feel there are few choices available and the products on the market have mixed results. Indeed, although consumers are in favour of legislation that protects their health and living environment, appearance remains very important in ornamental horticulture. We are therefore at a turning point that will determine how the use of green products will evolve. Will these products and services become mainstream consumer items or will they continue being niche products and remain marginalized? It is essential,

therefore, that we look at the most effective ways of leading consumers to make more environmentally friendly choices now so that recent awareness raising efforts have not been in vain.

Given that the growing interest in ornamental horticultural products and services is very recent, there is little or no data on the sales and use of alternatives to pesticides in this field. The most recent numbers for pesticide sales available from MDDEP, Quebec's ministry of sustainable development, the environment, and parks, are from 2004. This study **identifies the solutions and actions** that promote the development of more environmentally friendly ornamental horticulture products and services in order to achieve a very real economic and environmental impact on this growing industry and on consumers' behaviour.



<sup>3</sup> Marcon-DDM for the Table filière de l'horticulture ornementale (Quebec), *Étude de perception et de consommation des produits et services d'horticulture ornementale* [consumption and perception study on ornamental horticulture products and services], 2006.



## Executive Summary

### Getting to Know Consumers to Guide their Decision-making

Study on factors leading consumers to choose more environmentally friendly ornamental horticulture products and services.

A literature review, interviews with 16 retailers in Montreal, Vancouver and Toronto, and a survey of 1,311 Canadians who garden have allowed us to learn more about consumers' knowledge, perceptions, habits, and commitments when it comes to environmentally friendly ornamental horticulture products and services. The results shed new light on this growing reality.

The first part of this study consists of a literature review, which places the emphasis on the economic importance of the ornamental horticulture sector in Canada as well as the popularity of gardening with Canadians. Indeed, more than half of Canadians say they regularly or occasionally do gardening activities; regular gardening is more frequent in the 45 and older age group. The review also brought out the major differences in the behaviours, perceptions, and habits of people who garden according to their geographic location, gardening experience, and awareness of the environment. Furthermore, regulation surrounding pesticide use appears to have had a considerable effect on Canadians' gardening habits. Pesticide use has dropped by half in Quebec, going from 30 per cent in 1994 to 15 per cent in 2005, while it only slightly slipped nationally. Overall, the public seems favourable to legislation that governs cosmetic pesticide use; specifically, a survey of Ontario residents showed that 7 out of 10 Ontarians (71 per cent) would support such a regulation.

These differences influenced the content of the questionnaires sent to retailers and consumers.

The survey of 1,311 respondents who garden confirms bibliographic data. According to survey results, it would appear that the consumer market is not homogenous in its values, beliefs, attitudes, and behaviours. We observed differences in gardening habits according to geographic sector and, especially, according to city size. In general, gardeners who live in small communities and cities behave similarly to the average gardener on all accounts except lawns. Small community residents' pride in their yards is reflected in their behaviour: the cosmetic appearance of their lawns takes precedence over any environmental concerns.

It would also appear that gardening practices depends first and foremost on individuals' values. Environmental concerns do not seem to be a fundamental value strong enough in and of itself to influence and guide gardening habits. Finally, gardening habits also depend on individual experience, since those with the most experience are most likely to adopt good gardening practices.

Pesticides are not well regarded by respondents: the majority (71 per cent) believes that chemical pesticides ought to be banned, while only 25 per cent of respondents claim to use pesticides. Furthermore, this study proves that legislation passed in Quebec regarding pesticide use changed the opinions and behaviours of people who garden. Indeed, the vast majority (86 per cent) of Quebecers knows that pesticides are banned in Quebec, and a larger majority believe both





that pesticides can be harmful for human health and the environment, and that it is possible to obtain satisfactory results without resorting to chemical pesticides.

In terms of purchasing patterns, only 7 per cent of Canadians use lawn care services, and 13 per cent hire landscaping services. Most people who garden make their purchases in nurseries or box stores. Good quality-price ratio is important to many, and 6 per cent of people spontaneously answered that the environment is the main deciding factor when purchasing horticultural products and services. On average, 35 per cent of respondents claim to have already used the services of a company that offers environmentally recognized methods. However, costs remain a major issue and 82 per cent of people believe that environmentally friendly ornamental horticulture products are more expensive. Cost awareness is quite pronounced since 83 per cent of respondents believe that landscaping companies offering environmentally friendly services charge more. Moreover, nearly 50 per cent admit to not wanting to pay more for certified green products and services, though 89 per cent think that such products are truly better for the environment. Eighty-four per cent of respondents believe that service companies give satisfactory results. However, according to 63 per cent of respondents, companies offering more environmentally friendly horticulture services are difficult to find, while much of the population—64 per cent—thinks that there are plenty of products to meet its needs.

One out of every two Canadians (51 per cent) thinks that more environmentally friendly products are easy

to find and a large majority (82 per cent) believe that they are easy to use. However, when it comes to the effectiveness of certified green products, opinions are more divided. Forty three per cent of respondents think that these products are less effective than conventional products.

The neighbours' opinion is a matter of considerable importance to how Canadians care for their lawns. For half of the respondents (50 per cent), the neighbours' opinions regarding their lawn maintenance is very important.

Furthermore, Canadian gardeners' tolerance of weeds and yellowed grass is very low. Indeed, 64 per cent consider weeds intolerable, while 62 per cent will not tolerate yellowed or ugly grass. People living in small communities are the least tolerant.

It is interesting to note that a very large majority considers gardening to be an environmentally friendly gesture in and of itself. Only 25 per cent believe that gardening can harm the environment. However, 80 per cent think that certain gardening practices can be harmful to the environment.

This survey would indicate that information on more environmentally friendly horticulture practices, products, and services could be better distributed. On the one hand, we observe a lack of interest in nearly half (46 per cent) of people who garden, while on the other hand, those who are interested feel that the available information is not entirely satisfactory. Nearly half (46 per cent) admit to rarely or never seeking information on what might be beneficial or harmful to the environment when it comes to gardening,





and 48 per cent feel the information available is insufficient. Respondents turn to three sources of information, which, in order of use, are: Internet (74 per cent), personal referrals (72 per cent), and retail store employees (66 per cent). A large majority (80 per cent) thinks that there is a lack of information when it comes to distinguishing products that are environmentally friendly from those that are not.

For many respondents, the government is the first of three players who should promote the development of more environmentally friendly ornamental horticulture products and services. Next come municipalities, followed by retail stores. For the moment, only 36 per cent of respondents are satisfied with the government's promotion of more environmentally friendly products and services, while 50 per cent claim to be satisfied with municipalities, which are more proactive.

The retailers interviewed in the third part of the study fall into three categories: service providers, retailers, and municipalities. Although each category of retailers answered the questions according to its own reality, they all feel they play an important role in developing or offering more environmentally friendly ornamental horticulture products and services. In particular, they do so by training their employees to properly inform customers and by offering more alternative products

and services. They are also unanimous in feeling that more environmentally friendly ornamental horticulture is a long-lasting phenomenon and a sector with great potential, particularly for service providers.

However, the development of more environmentally friendly horticultural products and services faces several challenges. Among the greatest is a necessary change in public attitude in how people perceive what constitutes beautiful and healthy lawns or landscaping. Consumer education and awareness raising is vital in promoting this shift. The substantive work undertaken by environmental groups will lay the foundations for "greening" consumers, who will subsequently demand more environmentally friendly products and services. The primary obstacles retailers have identified are the mixed results of certain environmentally friendly products. One solution they have found is being able to show customers that green products and services obtain good results.

Finally, regulating the use of the terms *organic*, *green*, and *natural* is a sizeable task that requires both legislation at the federal and local levels, and an independent certification for green products and services. Without a strict framework, we will continue to see greenwashing<sup>4</sup>, which is unacceptable in the long term if the environmentally friendly horticultural sector is to grow.



<sup>4</sup>**Greenwashing** is a marketing strategy used by organizations (company, government, etc.) to create a public image of environmental responsibility when, in fact, more money is invested in "going green" publicity than in real actions for the environment.





The recommendations formulated in this document are intended for various players: governments, municipalities, retailers, and civil society organizations.

Governments are considered to be the most important players when it comes to taking responsibility to promote the development of more environmentally friendly ornamental horticulture products and services. First, consumers are poorly informed about green practices, products, and services. Furthermore, the current confusion around the terms *natural*, *organic* and *green* aggravates this situation. Thus, among other actions, governments must legislate the sale and use of products that are harmful to the environment and human health.

Additionally, there is a huge gap between what consumers think and what they do. Indeed, although a large majority of gardeners think environmentally recognized products truly are better for the environment and that service companies provide satisfactory results, most admit not wanting to pay more for environmentally recognized products and services. Thus, ongoing and awareness-raising and general public education efforts are necessary. Governments must carry out or support national education campaigns.

Retailers must work with governments and consumer and environmental groups to come to a proper definition of environmentally friendly horticulture products and services that takes into account their effects on the environment and on society. They also have a crucial role to play in educating their clientele, given the trust-based relationships they often form with their customers.

Finally, civil society organizations have a major role to play in education and awareness raising. In effect, they are an excellent communications vehicle (OR avenue of communication since they enjoy the trust of the majority of Canadians (76 per cent feel environmental groups play an important role and 67 per cent are satisfied with these groups' work to develop more environmentally friendly products and services).





# I. Literature Review

## 1.1 Introduction

This section presents a review of the literature on consumer habits surrounding more environmentally friendly ornamental horticulture products and services. We will provide data from both consumer studies and descriptions of the ornamental horticulture industry.

To better define the topic, let us start with the results of a study published in 2007 by Statistics Canada<sup>5</sup> and based primarily on data from the *Household Environment Study* (HES) carried out under the direction of the Canadian Environmental Sustainability Indicator project. This study is a snapshot of Canadians' gardening habits. Please note that the data on pesticide use were taken from the 1994 *Household Environment Study*.

**Note to reader:**

According to Statistics Canada, the May 16, 2006, census established Canada's population at 31,612,897<sup>6</sup>.

- **Lawn and garden care: a popular activity**

Landscaping activities are a favourite pastime for many Canadians, and much time and money is spent maintaining lawns and gardens. In fact, on a typical day in 2005, nearly 11 per cent of Canadians aged 30 and over spent time working on their lawn or garden, with the average participant spending more than two hours doing yard work.

However, we must note that not all Canadians are not all fans of gardening. According to

a CROP survey of 2,724 people carried out in 2006, 29 per cent of Canadians garden regularly and 25 per cent occasionally; 14 per cent garden rarely and 31 per cent never do. This survey shows that this regular activity is more frequent among those 45 and over (39 per cent) and/or those living in the Prairies and western provinces (30 per cent); this figure is 24 per cent for Quebecers.

The popularity of landscaping activities has resulted in a booming lawn and garden industry. The sale of lawn and garden products, equipment and plants from large retailers rose by more than \$600 million from 2002 to 2006, reaching over \$2 billion.

In 2006, almost three quarters of Canadian households had a lawn or garden. Lawns and gardens were particularly common in the Atlantic Provinces, with Newfoundland and Labrador, Prince Edward Island, and New Brunswick comprising the top three provinces.

- **Pesticide use dipped slightly at the national level, Quebec pesticide use cut in half<sup>7</sup>**

In spite of increased efforts to build awareness of the health threats of pesticides, there has been little change in Canadian households' use of pesticides on their lawns and gardens. The proportion of households that used pesticides slipped only marginally from 31 per cent in 1994 to 29 per cent in 2005. In spite of this national



<sup>5</sup>Mary-Frances LYNCH and Nancy HOFMANN. Environment Accounts and Statistics Division, Statistics Canada EnviroStats, Canadian lawns and gardens: *Where are they the "greenest"?*, Fall 2007

<sup>6</sup>Statistics Canada. 2006, *Portrait of the Canadian Population in 2006: Highlights* <http://www12.statcan.ca/francais/census06/analysis/popdwell/highlights.cfm>. Site consulted February 21, 2008.

<sup>7</sup>Mary-Frances Lynch and Nancy Hofmann, Environment Accounts and Statistics Division, Statistics Canada EnviroStats, Canadian lawns and gardens: *where are they the "greenest"?*, Fall 2007



trend, the proportion of households using pesticides was reduced by half in Quebec, going from 30 per cent of households applying pesticides to their lawn or garden in 1994 to only 15 per cent in 2005. The only other provinces to experience a decline in the proportion of households applying these substances were New Brunswick, Nova Scotia, and British Columbia. In contrast, the proportion of households using pesticides more than doubled in Newfoundland and Labrador and increased by almost half in Manitoba.

- **Prairies led country in pesticide use<sup>8</sup>**

In 2005, the Prairie provinces of Saskatchewan, Manitoba and Alberta led the country in pesticide use with about two out of every five households using them. In contrast, pesticide use was approximately two-thirds lower in Prince Edward Island and Quebec, where about 1 in 7 households (14 per cent) used them.

At the Census Metropolitan Area (CMA) level, some similar trends are found. Of the top three CMAs for pesticide use—Winnipeg, Saskatoon, and Regina—almost half of households used pesticides on their lawns and gardens. Meanwhile, cities in the province of Quebec had the lowest usage: Saguenay (12 per cent), Montreal (14 per cent), Sherbrooke (15 per cent) and Trois Rivières (16 per cent). In Ontario, the usage levels were more varied with about 45 per cent of households in Hamilton, Oshawa and Kitchener applying pesticides, while just under 30 per cent of households in Kingston applied them.

- **Ontario households used pesticides as regular maintenance, Prairie provinces used pesticides when problems arose<sup>9</sup>**

There are two main treatment options for pesticide use: 1) using pesticides as part of regular lawn or garden care maintenance, or 2) using pesticides when a problem or infestation arises.

Of Canadian households using pesticides, just over half used them as part of a regular maintenance schedule. Ontario had the highest proportion in the country—almost 60 per cent of households applied pesticides as part of a regular maintenance program in 2005.

Manitoba (41 per cent) and Saskatchewan (42 per cent) had the lowest proportion of households using pesticides as part of a regular maintenance offered by a service company. Instead, households in Manitoba and Saskatchewan preferred to use pesticides in response to pest problems. Almost 60 per cent of pesticide users in these two provinces used pesticides when a problem arose—the highest rates in the country.

- **Prairie lawns go green with fertilizers while Quebec lawns go au naturel<sup>10</sup>**

Fertilizers containing nitrogen, phosphorus and potassium add nutrients to lawns and gardens, making lawns greener and thicker. However, fertilizer use can be problematic if applied improperly or in excess. In such cases, these nutrients can run off into storm

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<sup>8</sup> Mary-Frances Lynch and Nancy Hofmann, Environment Accounts and Statistics Division, Statistics Canada EnviroStats, Canadian lawns and gardens: *where are they the “greenest”?*, Fall 2007

<sup>9</sup> idem

<sup>10</sup> idem



water sewers and local streams reaching lakes and other surface water bodies.<sup>11</sup> Household chemical fertilizer use was highest in Alberta and Saskatchewan, where nearly half of households with lawns or gardens applied fertilizers in 2005. Manitoba trailed closely with almost 40 per cent of households using them. Fertilizer use was particularly high in Saskatoon (57 per cent), Regina (54 per cent), Calgary (49 per cent) and Edmonton (48 per cent). Quebec had the lowest percentage of households applying fertilizers, with about 15 per cent using them. Montreal (13 per cent), Saguenay (15 per cent), Sherbooke (16 per cent) and Trois-Rivieres (17 per cent) had the lowest proportion of households using chemical fertilizers in the country. Although there is no ban on chemical fertilizers, as of April 2004, Quebec instituted a ban on the sale of fertilizer-pesticide mixtures.<sup>12</sup>

- **Water, water ... not everywhere**

Watering is another lawn and garden activity with environmental impact. Different climates, laws, natural physical features and cultural influences may influence watering. Domestic water consumption can increase up to 50 per cent during the summer months when many people water their lawns and gardens.<sup>13</sup>

In some parts of the country, grass will brown or die if it is not watered. Kentucky bluegrass, a common lawn grass used in North America, has low drought resistance and requires more water than other types of grass.

Three quarters of households watered their lawn or garden in 2005. New Brunswick and Prince Edward Island had the lowest proportion of households that watered their lawns and gardens. Ontario and British Columbia were the only two provinces above the national rate.

Over four out of every five Canadian households watered their gardens, while over half watered their lawns.

There were pronounced differences between provinces in terms of lawn watering. In Prince Edward Island and New Brunswick, about two out of every ten households watered their lawn. In comparison, six out of every ten households watered their lawns in Alberta, British Columbia, Saskatchewan and Ontario. Provincial differences were less pronounced for garden watering.

Nearly a quarter of Canadian households with lawns or gardens used sprinkler timers to assist in watering in 2005. Quebec was the only province where the use of sprinkler timers was higher than the national rate—26 per cent of Quebec households reported using a water sprinkler timer.

## **1.2 The Economic Importance of the Ornamental Horticulture Sector**

According to a summary by MAPAQ, ornamental horticulture is the largest horticultural crop in Quebec, followed by

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<sup>11</sup>C. Mason, 1991, *Biology of Freshwater Pollution*, John Wiley & Sons, Inc., New York.

<sup>12</sup> Government of Quebec, 2008, *Pesticide Management Code*, <http://www.mddep.gouv.qc.ca/pesticides/permis/code-gestion>. Site consulted February 28, 2008.

<sup>13</sup> Kansas State University, 2000, *Horticulture Report: Kentucky Bluegrass Lawns*.



fresh vegetables. In 2004, with cash receipts of more than \$287 million, ornamental horticulture production (farmgate value), which includes floriculture, nurseries, and lawns, made up 36 per cent of cash receipts for the entire horticulture industry (fruit, vegetables, and ornamental vegetables).<sup>14</sup> In 2006, cash receipts from production in the ornamental horticulture industry rose to \$290 million.<sup>15</sup>

Sales increased by 20.2 per cent between 1998 and 2003 for ornamental vegetables, greenhouse products, nurseries, cut flowers, and decorative plants.<sup>16</sup>

### 1.3 Purchasing Patterns in Ornamental Horticulture Products and Services

According to a study carried out for the Round Table in 2006, 46 per cent of consumer households gardened to improve the appearance of their homes, while 36.6 per cent considered gardening to be a pleasant pastime<sup>17</sup>. Interviewed consumers foresee that ornamental horticulture will occupy more of their leisure time in the coming years.

People are drawn to ornamental horticulture especially to improve the appearance of their homes; nearly one person out of every two gardens for this reason.

According to this study, the products the most consumers of ornamental horticulture

products and services buy are: soil, compost and mulch (66.3 per cent), annuals (63.1 per cent), and perennials (51.1 per cent).

However, a small proportion of households make use of ornamental horticulture services. This group is made up of home owners, residents of single family homes and households with incomes of \$75,000 and over. Lawn maintenance is the horticultural service purchased by the largest number of consumers of ornamental horticulture services (19.3 per cent).

Consumers choose plants according to their beauty, quality and health, flowering period and maturity, colour and hardiness. As for sources of information, surveyed consumers are most likely to obtain information from specialized periodicals (42.3 per cent), from family and friends (28 per cent), and from television shows on gardening (27.5 per cent). Once in the store, consumers ask for advice from store employees or read labels for product information.

In terms of buying trends in ornamental horticulture services over the next three years, surveyed consumers expect to increase their purchases of ornamental horticulture services such as lawn fertilizing, tree pruning and sculpting, other lawn treatments, landscaping, and lawn mowing.



<sup>14</sup> S. COLLIN, Direction des études économiques et d'appui aux filières, MAPAQ, *Portrait sommaire de l'industrie de l'horticulture ornementale au Québec* [summary report of the ornamental horticulture industry in Quebec], 2006.

<sup>15</sup> Institut de la statistique du Québec (ISQ) and Ministère de l'Agriculture, des Pêcheries et de l'Alimentation (MAPAQ). 2008, *Profil sectoriel de l'industrie horticole au Québec* [sector profile of the horticultural industry in Quebec], 2007 edition.

<sup>16</sup> ÉcoRessources – Consultants for the Conseil québécois de l'horticulture. *Enjeux, contraintes et opportunités du secteur de la production horticole à l'horizon 2010* [issues, constraints and opportunities in horticultural production between now and 2010], 2006.

<sup>17</sup> Marcon-DDM for the Table filière de l'horticulture ornementale (Quebec), *Étude de perception et de consommation des produits et services d'horticulture ornementale* [consumption and perception study on ornamental horticulture products and services], 2006.



## 1.4 Gardening and Awareness about Use of More Environmentally Friendly Horticultural Products

Studies of Quebec consumers show an increase in their awareness of environmental issues. Indeed, 51.7 per cent of surveyed households claimed to be more aware of the environment in 2006 than in 2004, while 42.1 per cent were just as aware in 2006 as they were in 2004.

In all, 93 per cent of horticulture consumers claim to be aware of using more environmentally friendly horticultural products.<sup>18</sup>

## 1.5 Consumer Perceptions of Regulation

Over the past two decades, nearly 140 Canadian municipalities have adopted by laws that ban or limit cosmetic pesticide use on public and private property.<sup>19</sup> Overall, the public seems to be in favour of such regulation.

For example, counting 1.8 million residents, the City of Montreal, in the province of Quebec, adopted a by law in April 2004 governing pesticide use on its territory. After three years of active awareness raising, the City surveyed its residents to measure the effectiveness of its communications plan regarding this regulation and its awareness-raising activities around more environmentally friendly gardening practices. The results are as follows:

- Nearly half (48 per cent) of citizens do not use lawn or garden maintenance products.
- A minority of Montrealers (nearly 1 out of every 10) have a landscaping or watering maintenance contract.
- A large majority (85 per cent) of city residents know about the by law banning pesticide use.
- Seven out of every 10 people (68 per cent) feel they are very or sufficiently informed about the regulation.
- Forty-three per cent of 18-34 year olds claim to have little information, as opposed to 29 per cent in the rest of the sample.
- Eight out of 10 people (83 per cent) agree somewhat or totally agree that their pesticide use has lowered since the municipal by law came into effect.<sup>20</sup>

In order to measure whether Ontarians would support or oppose legislation similar to the Quebec *Pesticide Management Code* banning the use of popular chemical pesticides on lawns and gardens, the organizations Pesticide Free Ontario and Canadian Physicians for the Environment ordered Oracle Poll Research to carry out a survey in February 2007 of 1,000 respondents who are residents of Ontario and of voting age. The results of this survey show, with an error margin of +/- 3.1 per cent, that more than 7 out of every 10 Ontarians (71 per cent) would support such legislation, 19 times out of 20.<sup>21</sup>



<sup>18</sup> Marcon-DDM for the Table filière de l'horticulture ornementale [round table on ornamental horticulture] (Quebec), *Étude de perception et de consommation des produits et services d'horticulture ornementale* [consumption and perception study on ornamental horticulture products and services], 2006.

<sup>19</sup> M. Christie, *Private Property Pesticide Bylaws in Canada*. Site consulted February 12, 2008. <http://www.flora.org/healthyottawa/BylawList.pdf>

<sup>20</sup> City of Montréal, 2006 *Communication Plan*, Awareness campaign, 2007.

<sup>21</sup> Oraclepoll Research Ltd. for Pesticides Free Ontario and Canadian Physicians for the Environment, Survey report, 2007.



## 1.6 Evaluation of Pesticide Use in Ornamental Horticulture

The MDDEP regularly conducts an evaluation of pesticide sales (Bilan des ventes de pesticides). The raw data for this evaluation is collected from retailers who hold permits for the wholesale of pesticides in Quebec. The 2004 sales report receipt rate was 89 per cent, which is comparable to data from other years. The most recent evaluation report available presents pesticide sales for 2004.

The Canadian pesticide market accounts for only 2 per cent of the global market, and pesticides are sold primarily in the western provinces. Sales in Quebec make up about 4 per cent the Canadian market. Sales were up by 2 per cent in 2004, in comparison to 2003, for all of Canada (all uses combined: forestry, industrial, household, agricultural production, green space maintenance, extermination, and other).<sup>22</sup>

In 2004, the sale of pesticides in Quebec totalled 9,818,690 kg of commercial products. The gross quantity of pesticides possesses 3,659,767 kg active ingredients. This is a very slight reduction (less than 0.1 per cent) in sales in comparison to the year before and a reduction of 9.3 per cent in comparison to 1992, the first year information on pesticide sales was compiled in Quebec.

### Note to reader:

The sectors of pesticide use compiled in the evaluation are: agricultural production, household, industrial,

green space maintenance, extermination, animal husbandry and other agricultural use, forestry, and other.

Pesticides in the household sector are used by individuals both in and out of doors. These Class 4 and 5 pesticides (based on the classification governed by legislation<sup>23</sup>) are sold in small quantities, and are generally diluted and ready for use. Sales in this sector include fertilizers impregnated with a pesticide and sold to individuals despite the *Pesticide Management's Code's* prohibition of such retail sale since April 3, 2004.

Pesticides in the green space maintenance sector are Class 3 (based on the classification governed by legislation<sup>24</sup>) and are used by residential and commercial green space maintenance companies. This also includes pesticides used for the maintenance of municipal green spaces and golf courses.

In 2004, in Quebec, the largest sales were in agricultural production with 73.4 per cent of sales. The household sector was second largest with 13.2 per cent of sales, while the green space maintenance sector came in fourth at 5.3 per cent of sales.

All sectors of pesticide use have been slipping since 1992 in Quebec, except for the household and green space maintenance sectors. Made up of these two sectors, the urban area is therefore the only one to show a constant increase in pesticide sales since the first data compilations and to present a substantial growth in environmental stress.



<sup>22</sup> GORSE and S. DION, *Bilan des ventes de pesticides au Québec pour l'année 2004* [evaluation of pesticide sales in Quebec for 2004], Québec, Ministère du Développement durable, de l'Environnement et des Parcs, 92 pp., 2008.

<sup>23</sup> Government of Quebec. 2008, Permits and certificates for the sale and use of pesticides, Regulation respecting, R.Q. c. P-9.3, r.0.1 [http://www2.publicationsduquebec.gouv.qc.ca/dynamicSearch/telecharge.php?type=2&file=/P\\_9\\_3/P9\\_3R0\\_1.HTM](http://www2.publicationsduquebec.gouv.qc.ca/dynamicSearch/telecharge.php?type=2&file=/P_9_3/P9_3R0_1.HTM). Page consulted March 19, 2008.

<sup>24</sup> Idem





## Evaluation of Pesticide Sales in the Household Sector

The volume of pesticide sales in the household sector was the second highest in 2004 with 481,951 kg of active ingredients (13.2 per cent of total sales). This quantity marks a reduction of 6.9 per cent of sales in comparison with 2003, but an increase of 25.2 per cent in comparison with 1992. Insecticides are the biggest sellers in the household sector, with 84.4 per cent of sales in 2004. Herbicides come in second with 8.6 per cent of sales.

Household insecticide use slightly decreased in 2004 in comparison with 2003 (1.8 per cent) to reach 406,940 kg of active ingredients.

Herbicides used on lawns, including herbicide-impregnated fertilizers and those used to destroy all vegetation, come in second with 8.6 per cent of sales; this is a major decline. Given that fertilizer-herbicides sales have been banned under the *Pesticide Management Code* since April 3, 2004, few of these products are being sold, which has made the sale of herbicides for household use drop considerably (36.3 per cent between 2003 and 2004).

Other than moth control products sold in large quantities (38.5 per cent), insect repellents (25.6 per cent), and garden insecticides (9.1 per cent) are the biggest sellers in the household sector in 2004. Sales of some other product categories are clearly on the rise since compilations were begun. This is the case with fungicides and ant baits. It is worrisome to see this major increase in garden fungicides and in all other categories of indoor and outdoor

insecticides, given that these products have some toxicity for users and their family members. Lawn herbicides and wood preservers are the two household use categories that have slipped the most since 2004.

## Evaluation of Pesticide Sales in Green Space Maintenance

In all, 192,781 kg of active ingredients were sold in the green space maintenance sector in 2004. Sales in this sector increased by 1.3 per cent in 2004 in comparison with 2003, and by 66.8 per cent in comparison with 1992. Herbicides are the most frequently sold pesticides in this sector, accounting for 65.5 per cent of sales, or 5.3 per cent of total sales. Other types of pesticides sold in this sector are fungicides (26.4 per cent of sales), insecticides (8 per cent of sales), and, in 2004, for the first time, a small quantity of growth regulators.

In comparison with 2003 levels, total sales in the green space maintenance sector increased by 1.3 per cent in 2004, despite the *Pesticides Management Code*, which banned the use of certain pesticides on public, parapublic, and municipal lawns as of April 3, 2004. Only insecticides saw a reduction in sales, while herbicide and fungicide sales are on the rise. Despite the major drop in insecticide sales (-37.3 per cent), the numbers remain well above those in past years. For 2004, this significant insecticide use can be attributed to the presence of white grubs that have ravaged huge lawn areas.

Few herbicides are used on the province's golf courses, which leaves nearly 94 per cent of herbicides on residential, commercial,







and municipal lawns. Furthermore, only 13 per cent of insecticides sold in the green space maintenance sector are used on golf courses, though 56 per cent of fungicides used are found on these surfaces. As a result, in 2004, golf courses were the largest consumers of fungicides, but used few insecticides and very few herbicides in comparison to other sectors of green space maintenance.

We performed a quantification to compare lawn pesticide use in the household sector with that of the green space maintenance sector. This exercise was done to identify urban pesticide use on lawns. To quantify what portion of sales for household use can be attributed to lawn maintenance, we meticulously classified the products. We analyzed the label of each product sold for household use to identify the product's usage. Only herbicides intended exclusively for lawn use (thus belonging to the household category "herbicides for lawn use"), fungicides and insecticides for lawns as well as impregnated lawn fertilizers were retained. The quantities were compared with those used by professionals in green space maintenance. However, it was impossible to identify the portion of active ingredients that green space maintenance companies use solely for residential green space maintenance as part of a service package. Indeed, the same products may be used on golf courses as on municipal and commercial green spaces. Similarly, areas treated by one or another of these sectors are unknown. Furthermore, certain commercial products can also be used in places other than lawns (shrubs or flowerbeds, for example).

Despite these drawbacks, the exercise nonetheless remains useful in identifying certain trends.

Table 1 shows the proportions of active ingredients individuals used on their residential lawns. The quantities of herbicides sold have dropped by 47.2 per cent in comparison with 2003 to reach 30,253 kg of active ingredients in 2004. This is one of the smallest quantities sold since 1992. Insecticides sales, however, are clearly on the rise (43.4 per cent) in comparison with 2003 numbers, and have reached their highest sales since the beginning of the compilations. Total quantities of pesticides for household use on lawns dropped in 2004 to slightly above the thirteen-year average of data compilation.





**Table 1: Distribution of lawn pesticide sales in the household sector for 1992 and 1999-2004**

Types of use	2004 (kg) a.i.	2003 (kg) a.i.	2002 (kg) a.i.	2001 (kg) a.i.	2000 (kg) a.i.	1999 (kg) a.i.	1992 (kg) a.i.
Herbicides	30 ,253	57 ,280	72 ,991	74 ,338	64 ,040	36 ,597	51 ,368
Insecticides	29 ,049	20 ,262	11 ,649	8 ,352	7 ,216	9 ,554	6 ,569
Fungicides	0	0	37	23	28	0	60
<b>TOTAL</b>	<b>59 ,302</b>	<b>77 ,542</b>	<b>84 ,677</b>	<b>82 ,713</b>	<b>71 ,284</b>	<b>46 ,151</b>	<b>57 ,997</b>

a.i: active ingredients  
Source : MDDEP, 2008.

To conclude the evaluation of pesticide sales in Quebec, let us clarify that in 2004 total sales of pesticides very slightly decreased (0.1 per cent) in comparison with 2003, and reflect a reduction of 9.3 per cent in comparison with 1992, the year the database was created.

**Table 2: Percentage of variation by sector of use**

Sectors of use	Sales 2004 (kg) a.i.	Variation from 2003 (per cent)	Variation from 1992 (per cent)	13-year average
Agricultural production	2 ,686 ,538	- 1.9	- 12.4	2 ,858 ,161
Household	481 ,951	- 6.9	+ 25.2	375 ,834
Industrial	254 ,920	+ 53.3	+ 19.0	177 ,479
Green space maintenance	192 ,781	+ 1.3	+ 66.8	155 ,260
Extermination	23 ,250	+ 44.9	- 27.3	33 ,063
Other	9 ,896	- 13.5	- 73.5	46 ,022
Animal husbandry and other agricultural use	9 ,747	+ 20.7	- 81.0	42 ,580
Forestry	684	- 94.8	- 99.5	20 ,773
<b>TOTAL</b>	<b>3 ,659 ,767</b>	<b>- 0.1</b>	<b>- 9.3</b>	<b>3 ,709 ,172</b>

a.i. active ingredients  
Source : MDDEP, 2008.





Except the household, green space maintenance, and industrial sectors, all sectors have been slipping since 1992. Consisting of the first two sectors, urban settings are therefore the only ones to have shown constant progression in pesticide sales since the beginning of the compilations, and to show a major increase in environmental stressors.





## 2. National Consumer Survey

### 2.1 Introduction

#### 2.1.1 Background

In October 2007, Équiterre commissioned the firm CROP Inc. to conduct a general population survey of Canadians to better identify the understanding, perception, and commitments of consumers when it comes to more environmentally friendly ornamental horticulture products and services. The main objective of the survey was to identify, from the consumer's point of view, the various factors that favour and discourage the consumption of more environmentally friendly ornamental horticulture products and services.

#### 2.1.2 Methodology

Before drafting the questions to be used in the survey, Équiterre submitted a review of the existing literature to CROP Inc. This review helped in developing a measurement tool for the topics to be discussed, the issues to be explored or updated, and the rating scales to be used.

The survey population was comprised of Canadians aged 18 and over, who were able to express themselves in French or in English, and who live permanently in Canada. The first questions allowed interviewers to identify those who garden regularly or occasionally. The initial survey was completed by a sample of **1,311 respondents who garden regularly or occasionally**, namely 176 people (7 per cent) in the Maritimes, 536 (24 per cent) in Quebec, 991 (38 per cent) in Ontario, 136 (6 per cent) in Manitoba, 143 (6 per cent) in Saskatchewan, 134 (5 per cent) in Alberta, and 411 (13 per cent) in British Columbia. This

allowed us to obtain the sample population's point of view with a maximal error margin of  $\pm 2.7$  per cent and a confidence interval of 95 per cent. The base sample was drawn from among 2,527 people (excluding inaccurate contact information and the non-response rate) who were screened for gardening practices, resulting in an overall incidence rate of 52 per cent.

To develop the sample, we applied a regional stratification criterion to achieve adequate representation of each of the country's major areas.

This study was conducted by online survey, and CROP used the services of Research Now ([www.researchnow.ca](http://www.researchnow.ca)), one of Canada's main web panel providers, which was in charge of sending email invitations to participate in the survey and hosting the questionnaire on its site.

The questionnaire was administered in French and in English. CROP collected the data from October 18 to November 7, 2007 using the web panel. The average time to fill out the questionnaire was 11.2 minutes for all respondents and 21 minutes for people who garden. The results were weighted according to region, age, gender, and language spoken at home to ensure a sample that is representative of the entire Canadian adult population.

The questionnaire was primarily made up of closed and semi-closed questions; it also had several (partly pre-coded) open questions.

The questionnaire was developed and translated by CROP, then programmed for use with computer assisted interviews (VoxCo's *Interviewer* software and system).





A pre test was carried out in French and in English, with about 15 eligible respondents.

The data was processed using statistical tables produced with the STAT-XP data processing software, which displayed the results for each question according to pre identified variables.

**Notes to reader:**

People who garden met the following criteria:

1. Garden. By *gardening* we mean lawn maintenance and landscaping with plants and flowers, but **not vegetable gardens**.
2. Have space to garden, be it at their main or second residence.

The results presented in the following pages are representative of Canadians who garden according to the above-mentioned criteria and cannot be extrapolated to the Canadian population as a whole.

City size was determined by respondents themselves, according to the following question:

Your main residence is located:

- In a large city → Census Metropolitan Area
- In the suburbs of a large city → Census Metropolitan Area
- In a small city → Small city
- In a small community → Small community
- In a rural area → rural area

## 2.2 Facts

### 2.2.1 Purchasing Patterns

Only 7 per cent of Canadians use lawn care services, and 13 per cent hire landscaping services.

- A large majority of gardeners make their purchases in plant nurseries and garden centres, or big box stores. However, the more people become interested in gardening, the more they shop in specialty stores. Large stores are

frequented more often by men, younger individuals, and Quebecers.

- A good quality-price ratio is important to many.
- Owners of smaller properties (50 m<sup>2</sup> or less) spend much less than those with medium-sized properties. However, there is little difference in spending between those with medium-sized properties and those with large properties.
- People's main purchasing factor is a good quality-price ratio. However, 6 per cent of people spontaneously answered that the environment is the main deciding factor when purchasing horticultural products and services

### 2.2.2 Gardening Habits

#### Dead leaves

- **Very few gardeners (8 per cent) put their leaves in the garbage or burn them.** Most leave their leaves on the lawn (22 per cent).
- Some said that they use the leaves as mulch (16 per cent), or compost them (21 per cent). However, there may be an overlap between response elements. Many respondents mentioned that they use leaves as mulch or compost them when, in fact, they leave their leaves on the lawn.

#### Mowing

- **A good many respondents (65 percent) use a gas-powered lawnmower to cut their grass.**
- Yard size has a direct influence on the equipment used to mow the lawn. **The larger the lawn, the more likely a lawnmower or tractor is used.**
- **Most (61 per cent) cut their lawn to higher than three inches.**





### Watering

- **A majority of people have good watering habits.** No more than a third (30 per cent) water their lawn regularly (once a week or more), while 36 per cent never water their lawns. Lawn watering includes the watering of flowerbeds and landscaping.

### Pesticide use

- **Pesticides are not well perceived.** A majority of respondents (71 per cent) believe that chemical pesticides ought to be banned, but 96 per cent think that pesticides would still be used even if they were prohibited.
- **People claim they use very little pesticides.** Only 25 per cent said they have used pesticides, among which the majority (62 per cent) have used chemical pesticides.
- For these respondents, **there does not seem to be much difference made between chemical pesticides and natural ones.** The majority (62 per cent) believes that natural pesticides are also likely to involve risks.
- **Thus, a majority (70 per cent) would not use herbicides to get rid of a dandelion invasion.** Most would pull them out with a special tool (32 per cent) or cut them with the lawnmower (22 per cent).
- **The majority (61 per cent) mentioned using homemade herbicides.**
- **This study shows that legislation on pesticide use in Quebec has modified the opinions and behaviours of gardeners.**
- Indeed, the vast majority (86 per cent) of Quebecers know that pesticides are banned in Quebec, and a larger majority believe both that pesticides

can be harmful for human health and the environment, and that it is possible to obtain satisfactory results without resorting to chemical pesticides.

- This negative perception of pesticides is, of course, reflected in behaviour. Pesticide use is lower in Quebec than in other provinces (13 per cent in Quebec versus 26 per cent for the rest of Canada).
- **The most avid pesticide users are in Ontario (32 per cent) and in the Prairies (30 per cent).** However, despite their higher use, most users (64 per cent and 60 per cent respectively) were in favour of regulation that would ban pesticides. A large part (43 per cent and 33 per cent respectively) do not know or believe that pesticide use is permitted in their provinces.

### Use of fertilizers and soil conditioners

- **The majority (66 per cent) said they use compost.** Since compost needs can exceed what can be produced at home, **people who garden generally buy compost.**
- **The use of chemical fertilizers is much less frequent,** with only 30 per cent saying that they use such products.

### Household composting

- **Very surprisingly, 59 per cent of people who garden claimed to make their own compost.** This proportion is surely inflated and can be explained by several factors:
  - Possible confusion between “using compost” and “making compost.”
  - At the beginning of the questionnaire, we asked respondents what they do with dead leaves. We gave “used them for compost” as one of the possible answers. It is possible that people who





compost their leaves answered “yes” for compost in general. Note, however, that we surveyed respondents later on in the questionnaire about household compost and we obtained a similar result (58 per cent).

#### Harvesting rainwater

- **More than a third (38 per cent) of gardeners use rainwater to water their yards.** Half (52 per cent) of people living in rural areas have this practice.

#### Choice of plant type

- **A vast majority (87 per cent) choose plant types according to their garden’s soil type.**
- **The majority (59 per cent) plant indigenous (or wild) species.** It is possible that respondents confused indigenous plants with rustic or perennial plants. This trend is seen more in rural areas where much larger yards encourage people to plant species that are more resistant and better adapted to local conditions.

#### Perceived value of environmentally recognized horticulture products and services

- Nearly half of respondents admitted to being reluctant to pay more for a more environmentally friendly product.
- Price remains a major issue. Approximately 82 per cent believe that more environmentally friendly products are more expensive.

### 2.2.3 Opinions about Gardening

**For half of respondents (50 per cent), the neighbours’ opinion regarding their lawn maintenance is very important.**

#### Weed tolerance

**Sixty-four per cent of respondents find weeds intolerable, while 62 per cent would not tolerate a yellowed or ugly lawn.** Quebec is the province with the lowest proportion of people who tolerate weeds and yellowed lawn. People living in small communities are the least tolerant of weeds and yellowed grass.

#### General points of view on green gardening

- A very large majority consider gardening to be an environmentally friendly gesture in and of itself. **Only 25 per cent believe that gardening can harm the environment.**
- Contradictorily, **80 per cent think that certain gardening practices can be harmful to the environment.** The 25 to 34 age group is most likely (88 per cent) to believe this as well as people with a higher level of education: 83 per cent with undergraduate degrees and 88 per cent of post-graduates.
- **35 per cent of respondents claim to have already used the services of a company that offers environmentally recognized methods.**

#### Opinions on more environmentally friendly products

Many (82 per cent) think that the prices of green products are more expensive. However, opinions are more divided when it comes to the effectiveness of certified green products since 43 per cent of respondents think that these products are less effective than conventional products.

One out of every two Canadians (51 per cent) thinks that more environmentally friendly products are easy to find. A large majority (82 per cent) believe that they are easy to use.





A large majority (80 per cent) thinks that there is a lack of information when it comes to distinguishing products that are environmentally friendly from those that are not. Indeed, 89 per cent of Canadians feel that green products truly are better for the environment.

One out of every two Canadians (51 per cent) thinks that green products are easily identifiable on the shelf.

A rather large portion of the population—64 per cent—thinks that there are plenty of products to meet their needs.

#### **Opinions regarding companies offering more environmentally friendly horticulture services**

Eighty-three per cent of people think that companies offering environmentally recognized horticulture services charge higher prices. However, these companies do give satisfactory results, according to the majority of respondents (84 per cent).

Sixty-three per cent of respondents feel that these services are difficult to find.

#### **2.2.4 Market Players**

- We surveyed gardeners' level of satisfaction with various players' involvement in the development of more environmentally friendly ornamental horticulture products and services. Respondents are most satisfied with the actions of **two groups**: those of **environmental organizations and of gardeners themselves**.
- **However, respondents are much less satisfied with government action (36 per cent)**. They consider

municipalities to be more proactive, with 50 per cent claiming to be satisfied. Results are mixed for retail stores: 48 per cent are satisfied with retailers' role.

- **They have high expectations of governments and municipalities in the future**, and give equal importance to stores selling more environmentally friendly products, horticultural service companies, and environmental organizations, in promoting the development and use of green products.

#### **2.2.5 Information**

- **There is room for improvement in the distribution of information on more environmentally friendly gardening.** On the one hand, we observe a lack of interest in nearly half (46 per cent) of people who garden, while on the other, those who are interested feel that the available information is not entirely satisfactory.
  - Nearly half (46 per cent) admitted to rarely or never seeking information on what might be beneficial or harmful to the environment.
  - Only 11 per cent said they are very well informed. A large majority claimed to be rather well informed (51 per cent), and many (38 per cent) said they are poorly informed. Forty-eight per cent felt the information available is insufficient.
- **Respondents turn to three sources of information, which, in order of use, are: Internet (74 per cent), personal referrals (72 per cent), and retail store employees (66 per cent).**







## 2.2.6 In-depth Profile of Horticultural Service Company Users

In all, 17 per cent of gardeners do business with a horticultural maintenance company. Among them, 40 per cent do so for lawn maintenance and 73 per cent for landscaping.

- Regional distribution is comparable to the national average of gardeners, of which the majority is found in Ontario (45 per cent) and Quebec (21 per cent). Note the very low presence in the Maritimes (5 per cent).
- Gardeners are **older**: nearly three-quarters (72 per cent) are aged 45 and over. We also observed a high proportion of gardeners 65 and over (18 per cent). Consequently, more than a third (34 per cent) are retired. Many are more educated, and in terms of gender and income, the breakdown is comparable to the average.
- They live primarily in **large cities** (28 per cent) or **suburbs of large cities** (20 per cent).
- When it comes to purchasing patterns, they **spend more than other groups**. Nearly a third (32 per cent) spends more than \$300. They **tend to choose quality** (34 per cent) over price (24 per cent).
- They naturally show **only slight interest for gardening**: a quarter gave it a rating of 5 or less. In general, they **do not have good lawn maintenance behaviour**. They use more chemical pesticides than other groups (49 per cent) and more than a third (36 per cent) are against the implementation of pesticide regulations.
- Nevertheless, they also resort more to environmentally friendly products and services. Nearly half of them (46 per cent) have used such products. Furthermore, many (23 per cent) say they have used natural pesticides.

## 2.3 Presentation and Analysis of the Results

### Notes to reader:

The boxed text that accompanies each result (graphic or table) provides relevant additional information. These texts present data that are significantly different from the average.

All the results take into account respondents who garden and have a garden, be it at their main or second residence.

The statistical data processing was carried out with STAT XP software in order to produce crossed tables for an in-depth analysis of the results.

- The total of certain results is not always equal to 100 per cent since calculations are based on rounded percentages.
- The total of certain results can sometimes exceed 100 per cent because some questions allowed multiple answers.
- When relevant, significant statistical differences were noted.

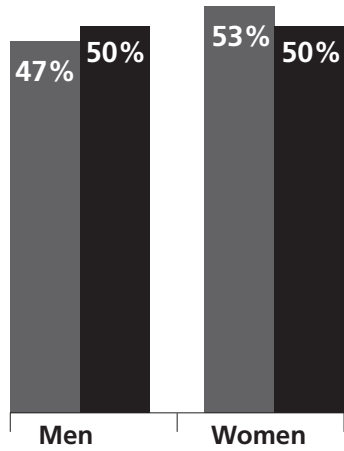




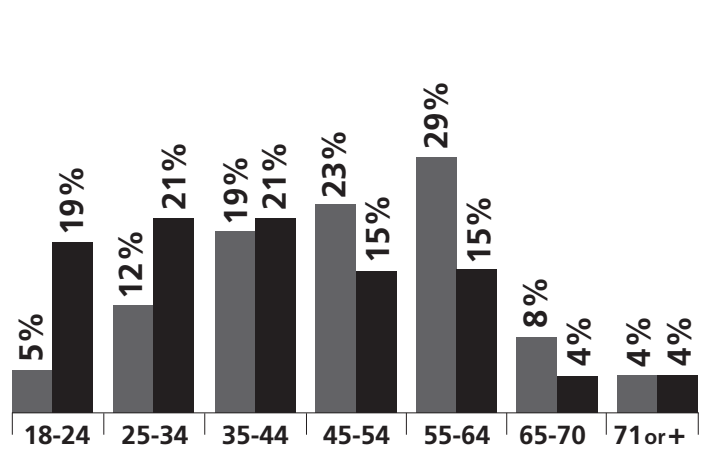
### 2.3.1 Profile of Gardeners

#### Profile of Gardeners

Distribution by Sex

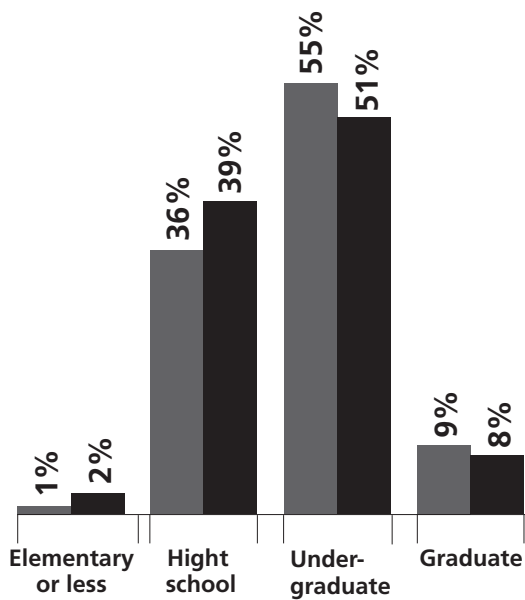


Distribution by Age (n = 1311)

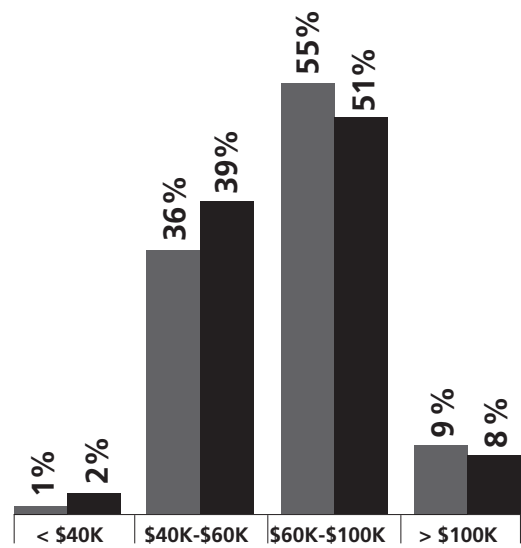


■ People who garden  
 ■ People who do not garden

Distribution by Education (n = 1311)



Distribution by Income (n = 1311)



■ People who garden  
 ■ People who do not garden



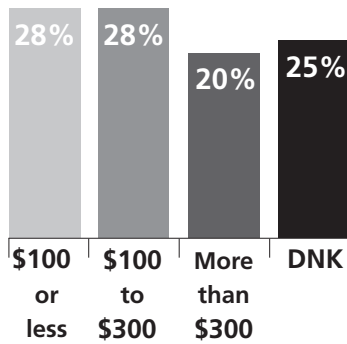


The distribution of the population according to education, as shown here, reflects the total Canadian population with a gap of about 3 per cent per category (in comparison with data from Statistics Canada).

### 2.3.2 Gardeners' Behaviour

#### Spending on Gardening Products\*

In-store spending, over the past year, on gardening products for yard maintenance (n= 1311)



#### Those who spent the most

- Ontario (24% spent more than \$300)
- The 55-64 age group (24% spent more than \$300)
- Residents of rural areas (25% spent more than \$300)

#### Those who spent the least

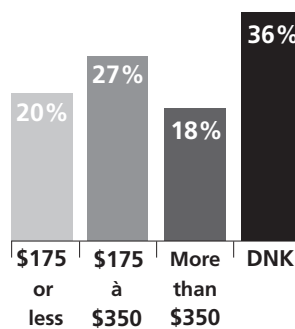
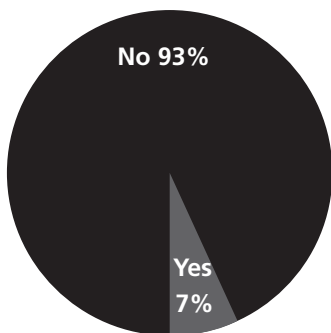
- The 25-34 age group (42% spent \$100 or less)

Average = **\$300**

#### Use of Horticulture Services\*

Use of lawn maintenance services (n = 1311)

Spending on lawn maintenance services last summer (n = 86)



Average = **\$462**



\* For respondents who garden and have a garden plot, be it at their main or second residence.



**Those who use the most services**

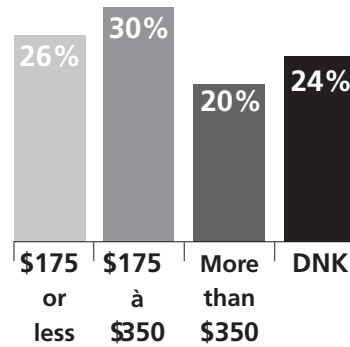
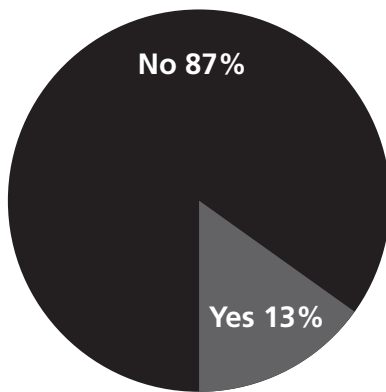
- Quebec (17%) and British Columbia (11%)

**Those who use the least services**

- Ontario (3%), the Maritimes (3%), and the Prairies (3%)
- The smaller the city, the fewer lawn maintenance services are used.

Use of lawn maintenance services (n = 1311)

Spending on lawn maintenance services last summer (n = 172)



Average = **\$302**

**Those who use the most services**

- Ontario (18%) and gardeners 65 and over (19%)
- People with an undergraduate education (15%)
- The larger the city, the more people use this service.

**Those who use the least services**

- Quebec (3%) and the 35-44 age group (10%)
- People with a secondary school level education (9%)

In this context, landscaping services include the maintenance of both flowerbeds and landscaping. This denotes all services other than lawn services.



\* For respondents who garden and have a garden plot, be it at their main or second residence.



### Places Where Yard Maintenance Products Are Purchased\*

Places most frequented to purchase yard maintenance products	TOTAL (n = 1311) Multiple answers
Plant nurseries or garden centres	69%
Big box or hardware stores	62%
Public markets	9%
Directly from the producer	6%
Canadian Tire	1%
Walmart	1%
Grocery store	1%
Other	3%

- People who are the most interested in gardening buy more in plant nurseries and garden centres (74%) and directly from producers (7%) than the average (69%).
- With an average of 74%, Quebec are the most numerous to go to big box or hardware stores for their gardening products.
- Men (74%) frequent big box or hardware stores more than women (11%), who are more likely to go to public markets.
- Young people (the 25-34 and 35-44 age groups) tend to go to big box or hardware stores (73 and 71%) while older people (the 55-64 and 65 and over age groups) favour plant nurseries or garden centres (74 and 76%).
- People in the highest income bracket (more than \$100K) are more inclined (81%) to go to plant nurseries or garden centres.



\* For respondents who garden and have a garden plot, be it at their main or second residence.



### Gardening Products and Services: Main Purchasing Factors\*

Which factor do you consider the most important when purchasing gardening products or services?  
(n = 1311)

#### Spontaneous answers



- On the whole, people seek a good quality-price ratio.
- 6% spontaneously gave the environment as their main purchasing factor.
- The more people earn, the more choice they want to have.



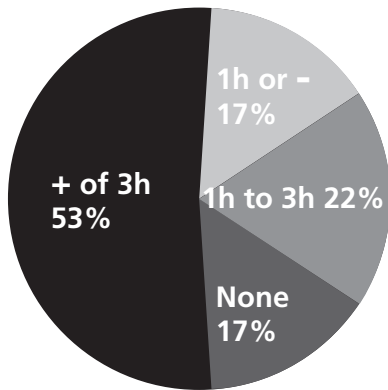
\* For respondents who garden and have a garden plot, be it at their main or second residence.



	More important	Less important
<b>Price</b>	<ul style="list-style-type: none"> <li>• Prairies (32 per cent)</li> <li>• 25-34 age group (41 per cent)</li> </ul>	<ul style="list-style-type: none"> <li>• Quebec (21 per cent) and B.C. (20 per cent)</li> <li>• People with income of \$100K and over (17 per cent)</li> </ul>
<b>Quality</b>	<ul style="list-style-type: none"> <li>• Quebec (34 per cent)</li> <li>• Rural areas (32 per cent)</li> </ul>	<ul style="list-style-type: none"> <li>• Maritimes (19 per cent)</li> </ul>
<b>The environment</b>	<ul style="list-style-type: none"> <li>• Quebec (14 per cent)</li> <li>• 35-44 age group (9 per cent)</li> </ul>	<ul style="list-style-type: none"> <li>• Ontario (3 per cent)</li> <li>• 25-34 age group (1 per cent)</li> </ul>

### Time Devoted to Gardening\*

Time devoted per month to lawn maintenance last summer (n = 1311)



#### Those who spent the most time

- People in the Maritimes (68% spent more than three hours per month)
- Men (64% spent more than three hours per month)
- Residents of rural areas (69% spent more than three hours per month)

#### Those who spent the least time

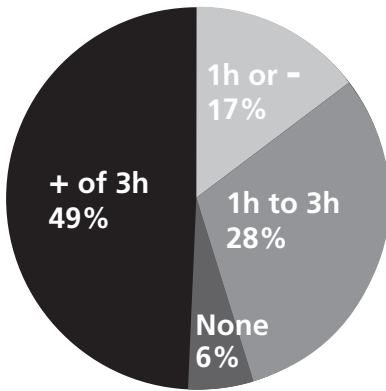
- Quebec and British Columbia (22 and 23%, respectively, do not spend time gardening)
- People 65 and over (23% spent no time gardening)
- Residents of large cities (23% spent no time gardening)
- The larger the city, the less time is spent gardening.



\* For respondents who garden and have a garden plot, be it at their main or second residence.



Time devoted per month to maintaining flowerbeds or flowerboxes last summer (n = 1311)



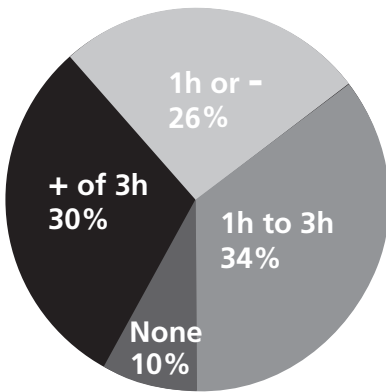
**Those who spent the most time**

- Women (62% spent more than three hours per month)
- Three age groups, the 45-54 (54%), the 55-64 (53%), and the 65 and over (58%), spent more than three hours per month.

**Those who spent the least time**

- People in the Maritimes (12% spent no time)
- Men (9% spent no time)
- The 25-34 age group (11% spent no time and 29% spent one hour or less)
- Those who earn less than \$40K (8% spent no time)

Time spent, per month, sowing or planting new plants or flowers last summer (n = 1311)



**Those who spent the most time**

- Women (39% spent more than three hours)
- The 55-64 age group (35% spent more than three hours)
- People in small communities (38% spent more than three hours)

**Those who spent the least time**

- People in the Maritimes (17% spent no time)
- The 18-24 and 25-34 age groups (18% spent no time)
- People who earn less than \$40K (13% spent no time)



\* For respondents who garden and have a garden plot, be it at their main or second residence.

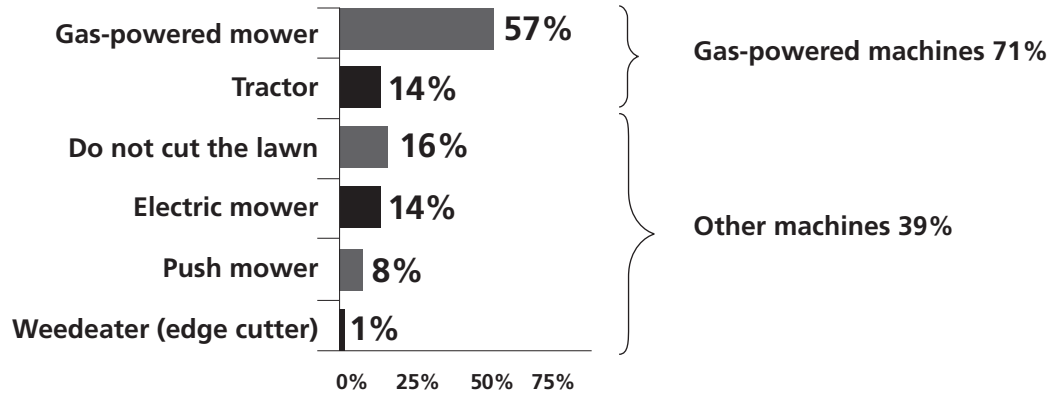




### Lawn Mowing Methods\*

How do you mow your lawn? (n = 1311)

#### Multiple answers



#### Those who use a gas-powered mower or a tractor

- The Maritimes (79%) and the Prairies (70%)
- Men (74%)
- Residents of rural areas (86%) and small communities (73%)
- People who earn \$60-\$100K (70% use polluting methods)

#### Those who use another method

- British Columbia (51%)
- The 18-24 age group (34%)
- Residents of large cities (52% use polluting methods and 30% use non-polluting methods)
- The larger the city, the less people use polluting methods.
- People who earn less than \$40K (58% use polluting methods)



\* For respondents who garden and have a garden plot, be it at their main or second residence.



### Watering Frequency\*

Frequency of watering last summer	TOTAL (n =1311)
Every day or so	3%
Two or more times a week	14%
Once a week	13%
Only after a long period without rain	32%
I own an irrigation system equipped with a device that turns it off automatically when it rains	2%
I do not water my grass	36%

#### Regular watering

- British Columbia (47%)
- Residents of small cities (34%)
- People who earn \$60-\$100K (36%) and more than \$100K (37%)

#### As-needed watering

- The Prairies (41%)
- The residents of large cities (41%)

#### No watering

- Quebec (45%) and the Maritimes (51%)
- Residents of rural areas (56%)
- People who earn less than \$40K (42%)

Here, we mean lawn watering, which includes watering flowerbeds and flowers.

### Conduct when Dealing with a Dandelion or Weed Invasion\*

How would you deal with a dandelion or weed invasion [sic]?	TOTAL (n = 1311)
I would pull them out by hand, one by one	9%
I would pull them out with a tool made for this purpose	32%
I would cut them with the lawn mower	22%
I wouldn't do anything in particular/would let them grow	7%
I would use a herbicide to get rid of them	12%
I would use a herbicide to prevent their occurrence	8%
I would entrust this task to a maintenance service	7%

#### Cut or pull them out (63%)

- The Maritimes (80%) and Quebec (69%)
- Women (67%)
- People who earn less than \$40K (69%)

#### Let them grow (7%)

- Quebec (18%)
- Women (8%)
- Residents of rural areas (12%)
- People who earn \$40-\$60K (9%)

#### Use a herbicide (27%)

- Quebec (33%), Ontario (40%)
- Men (35%)
- The 55-64 age group (33%)
- Residents of small communities (33%)
- People who earn \$60-\$100K (32%) and more than \$100K (40%)

\* For respondents who garden and have a garden plot, be it at their main or second residence.



### Conduct when Dealing with Dead Leaves\*

Last fall, what did you do with the leaves that fell on your lawn [sic]?	TOTAL (n = 1311)	
I put them in the garbage	7 %	} 8% Bad practices
I burned them	1 %	
I left them on the ground	22 %	} 78% Good practices
I used them for mulch	16 %	
I used them for compost	21 %	
They were picked up by the municipality	19 %	

#### Good practices (59%)

- Maritimes (73%) and British Columbia (67%)
- Residents of rural areas (80%) and small communities (68%)
- The smaller the cities, the better people's habits.

#### Bad practices (9%)

- Quebec (13%) and the Prairies (15%)
- The 25-34 age group (13%)
- Residents of large cities (11%)

#### Picked up by the municipality (19%)

- Quebec (25%) and Ontario (25%)
- Large cities (28%)
- The smaller the city, the less leaves are picked up by the municipality.
- People who earn more than \$100K (29%)

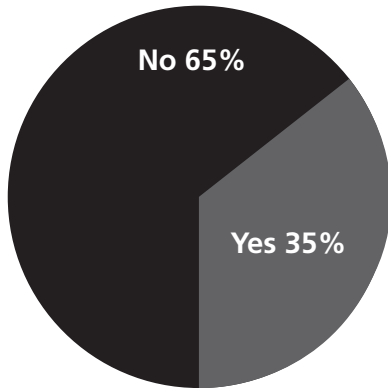


\* For respondents who garden and have a garden plot, be it at their main or second residence.



### Using More Environmentally Friendly Gardening Products and Services \*

Have you ever used an environmentally recognized gardening product or service [sic]? (n = 1311)



#### Those who used the most

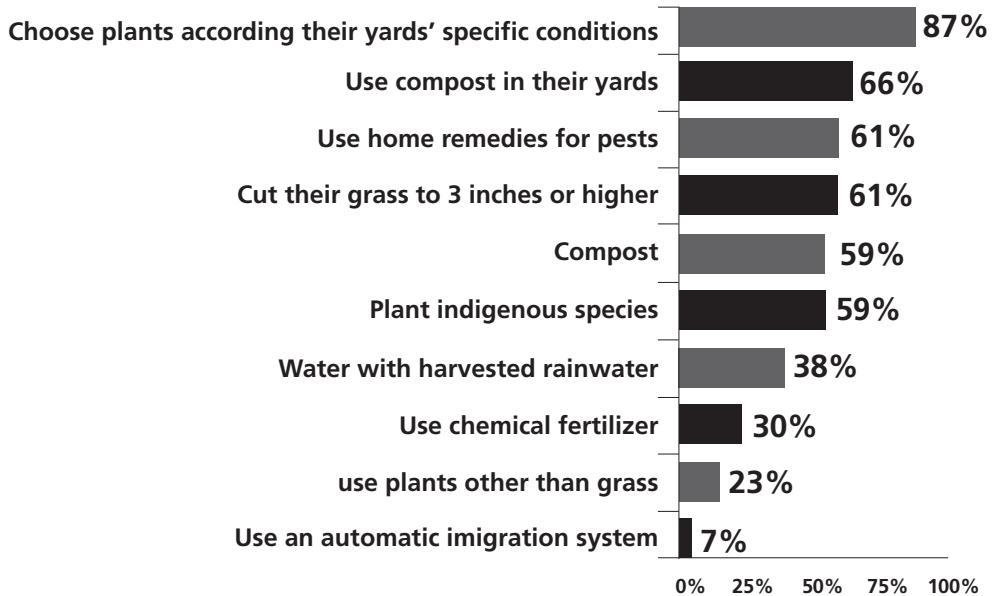
- Quebec (51%)
- Large cities (40%)
- People who earn \$40-\$60K (42%)

#### Those who used the least

- The Maritimes (25%)
- People who earn \$40K (29%)

### Gardening Practices\*

Percentage of people having adopted each practice (n = 1311)



\* For respondents who garden and have a garden plot, be it at their main or second residence.



## Gardening Practices\*

	Those most likely to...	Those least likely to...
<b>Choose plants according to their yards' specific conditions (87%)</b>	<ul style="list-style-type: none"> <li>• Women (92%)</li> <li>• Post-graduates (94%)</li> </ul>	<ul style="list-style-type: none"> <li>• Men (82%)</li> <li>• The 18-24 (77%) and 25-34 (78%) age group</li> <li>• The 55-64 age group (41%)</li> </ul>
<b>Use compost in their yards (66%)</b>	<ul style="list-style-type: none"> <li>• British Columbia (75%)</li> <li>• Men (70%)</li> <li>• The 55-64 (71%) and the 65 and over (76%) age groups</li> <li>• Rural areas (74%)</li> </ul>	<ul style="list-style-type: none"> <li>• The Prairies (57%)</li> <li>• Women (62%)</li> <li>• The 25-34 age group (55%)</li> <li>• Large cities (60%)</li> </ul>
<b>Use home remedies for pests (61%)</b>	<ul style="list-style-type: none"> <li>• Women (69%)</li> <li>• The 55-64 (66%) and the 65 and over (70%) age groups</li> <li>• Rural areas (69%)</li> <li>• Less than \$40K (65%)</li> </ul>	<ul style="list-style-type: none"> <li>• Ontario (56%)</li> <li>• Men (52%)</li> <li>• The 18-24 (45%) and 25-34 (50%) age groups</li> <li>• Over \$100K (53%)</li> </ul>
<b>Cut their lawn to 3 inches or higher (61%)</b>	<ul style="list-style-type: none"> <li>• Ontario (66%)</li> <li>• Women (64%)</li> </ul>	<ul style="list-style-type: none"> <li>• British Columbia (52%)</li> <li>• Men (58%)</li> <li>• The 18-24 age group (44%)</li> </ul>
<b>Compost (59%)</b>	<ul style="list-style-type: none"> <li>• British Columbia (72%)</li> <li>• Men (63%)</li> <li>• The 55-64 age group (65%)</li> <li>• Rural areas (72%)</li> </ul>	<ul style="list-style-type: none"> <li>• Quebec (59%)</li> <li>• Women (54%)</li> <li>• The 25-34 (51%) and 45-54 (54%) age groups</li> </ul>
<b>Plant indigenous plants or flowers (61%)</b>	<ul style="list-style-type: none"> <li>• The 35-44 (66%) and 55-64 (64%) age groups</li> <li>• Rural areas (70%)</li> </ul>	<ul style="list-style-type: none"> <li>• Large cities (49%)</li> <li>• The 25-34 (49%) and the 65 and over (47%) age groups</li> <li>• Small communities (53%)</li> </ul>
<b>Harvest rainwater for watering (38%)</b>	<ul style="list-style-type: none"> <li>• The Prairies (51%)</li> <li>• Rural areas (52%)</li> </ul>	<ul style="list-style-type: none"> <li>• British Columbia (29%)</li> <li>• Large cities (34%) and small communities (34%)</li> </ul>



\* For respondents who garden and have a garden plot, be it at their main or second residence.

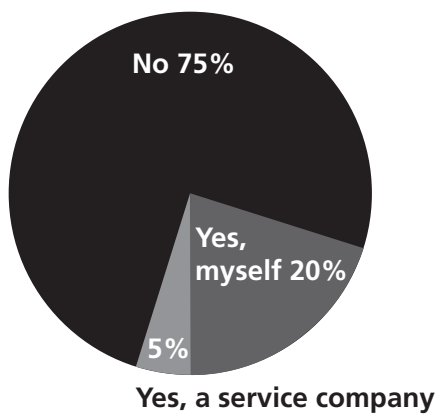


	Those most likely to...	Those least likely to...
<b>Use chemical fertilizers (30%)</b>	<ul style="list-style-type: none"> <li>• Ontario (37%) and the Prairies (39%)</li> <li>• Men (36%)</li> <li>• The 55-64 age group (36%)</li> <li>• Small communities (36%)</li> <li>• \$60-\$100K (37%) and over \$100K (44%)</li> </ul>	<ul style="list-style-type: none"> <li>• Quebec (9%)</li> <li>• Women (25%)</li> <li>• The 18-24 (19%) and 35-44 (23%) age groups</li> <li>• Rural areas (22%)</li> <li>• Less than \$40K (22%)</li> </ul>
<b>Sow seed other than grass, such as cover or legumes (23%)</b>	<ul style="list-style-type: none"> <li>• Quebec (37%)</li> <li>• Men (26%)</li> <li>• Rural areas (36%)</li> <li>• Post-graduates (33%)</li> </ul>	<ul style="list-style-type: none"> <li>• The Prairies (13%)</li> <li>• Women (21%)</li> <li>• Small communities (17%)</li> <li>• Secondary school graduates (19%)</li> </ul>
<b>Use a programmable automatic irrigation system (7%)</b>	<ul style="list-style-type: none"> <li>• British Columbia (20%)</li> <li>• The 18-24 age group (14%)</li> <li>• Rural areas (70%)</li> <li>• \$60-\$100K (10%) and more than 100K\$ (14%)</li> </ul>	<ul style="list-style-type: none"> <li>• Ontario (5%) and the Maritimes (3%)</li> <li>• The 25-34 (3%) and 35-44 (4%) age groups</li> <li>• Less than \$40K (4%)</li> </ul>

N.B : Here, we mean choosing plants according to soil conditions and types of plants other than grass. The term seed was chosen to help respondents understand the questions.

### Pesticide Usage\*

Last summer, did you or a horticultural service company use pesticides in your yard [sic]? (n = 1311)



#### The most likely to use chemical pesticides (26%)

- Ontario (32%)
- Men (31%)
- The 55-64 age group (34%)
- \$60-\$100K (32%) and more than \$100K (36%)

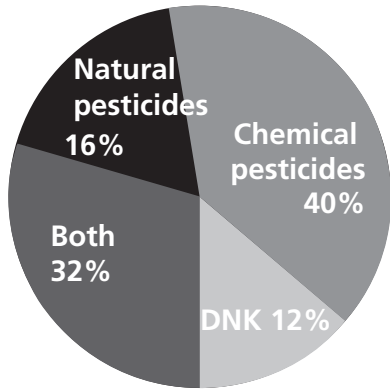
#### The least likely to use chemical pesticides (26%)

- Quebec (13%)
- Women (21%)
- The 25-34 (18%) and 35-44 (18%) age groups
- Residents of rural areas (20%)

\* For respondents who garden and have a garden plot, be it at their main or second residence.



What kind of pesticides did you use [sic]?(n = 340) (percentage who claimed to have used pesticides)



**The most likely to use natural pesticides (16%)**

- The 35-44 age group (34%)
- Residents of large cities (22%)
- \$40-\$60K (23%)

**The most likely to use chemical pesticides (40%)**

- (no significant difference)

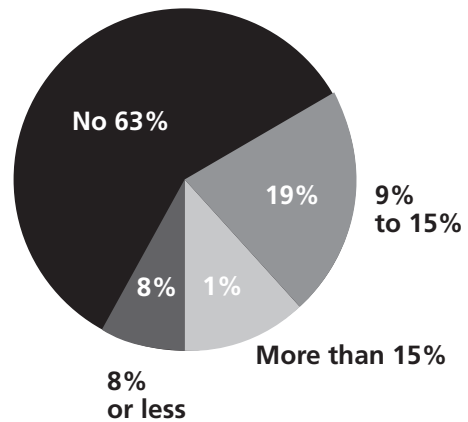
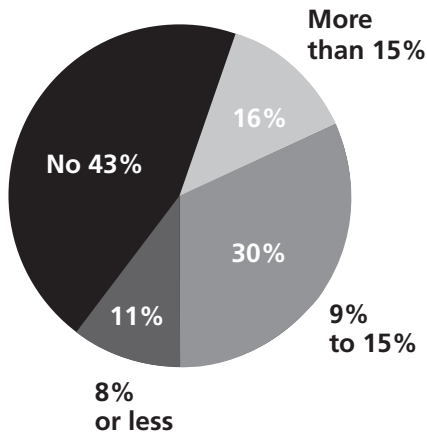
**The most likely to use both types pesticides (32%)**

- British Columbia (49%)
- The 55-64 age group (40%)

**Perceived Value of Green Products and Services\***

Would you pay more for an environmentally recognized gardening product? If so, what percentage more? [sic] (n = 1311)

Would you pay more for an environmentally recognized gardening service? If so, what percentage more [sic]? (n = 1311)



\* For respondents who garden and have a garden plot, be it at their main or second residence.



**Most likely not to pay more for green gardening products (43%)**

- Ontario (46%)
- The 45-54 (48%) and the 65 and over (54%) age groups
- Less than \$40K (50%)

**Most likely to pay 8% or less more (11%)**

- The 25-34 age group (17%)
- \$40K or less (13%)

**Most likely to pay 9% and more (46%)**

- The 25-34 age group (55%)
- \$60-\$100K (54%) and more than \$100K (55%)

**Most likely not to pay more for a green gardening service (63%)**

- The 45-54 age group (68%)
- \$40K or less (70%)

**The most likely to pay 8% or less (8%) more**

- The 18-24 age group (17%)
- Residents of small communities (10%)

**The most likely to pay 9% and more (29%)**

- The 18-24 (41%) and 25-34 (37%) age groups
- Residents of large cities (34%)
- \$60-\$100K (34%)

**2.3.3 The Opinions of Gardeners**

**General Opinions on Gardening\***

	Totally agree	Some-what agree	Agree	Some-what disagree	Disagree	Totally disagree
Gardening is expensive	13%	48%	61%	32%	7%	39%
Gardening = entertainment	23%	48%	71%	23%	6%	29%
Gardening = staying fit	15%	45%	60%	25%	14%	39%
Gardening = chore	9%	32%	41%	34%	25%	59%
Weeds = intolerable	21%	43%	62%	28%	10%	38%
Ugly or yellowed grass = intolerable	25%	37%	62%	28%	10%	38%
Neighbours' opinions = important	14%	36%	50%	28%	22%	50%



\* For respondents who garden and have a garden plot, be it at their main or second residence.





## General Opinions on Gardening\*

### **Gardening = Expensive (61% agree)**

- In contrast to Quebec (46%), the Maritimes (72%) and Ontario (64%) are the provinces where the most people agreed that gardening is expensive.
- More women (65%) than men (57%) found this statement to be true.
- The 35-44 age group has the most people (52%) who agreed with this statement.
- Only 50% of undergraduates support this statement.

### **Gardening = Entertainment (71% agree)**

- Quebec (81%) has the most residents who agree that gardening is a form of entertainment.
- More women (77%) than men (65%) find gardening entertaining.
- The 55-64 age group (77%) has the most people who agreed with this statement, in contrast to the 25-34 age bracket (60%).
- Only 66% of people in small communities think gardening is entertaining.
- The more people have a higher level of education, the more they are to deviate from this statement (76% of secondary school graduates agreed while only 59% of post-graduates agreed).

### **Gardening = Staying fit (60% agree)**

- More women (67%) than men (53%) claimed that gardening is their way of staying in fit.
- The 65 and over (71%) and 55-64 (68%) age groups have the most people who agreed with this statement.
- More people in rural areas (70%) and small cities (67%) agreed with this statement than those living in large cities (55%). The nearer we get to large cities, the more people think gardening is a way of staying fit.
- Secondary school graduates (67%) are more numerous to agree with this statement, in contrast with post-graduates (57%).

### **Satisfaction = everything is perfect (74% agree)**

- 78% of secondary school graduates, as opposed to 70% of undergraduates, agreed with this statement.



\* For respondents who garden and have a garden plot, be it at their main or second residence.



### **Gardening = A chore (41% agree)**

- Quebec (18%) is the province where the fewest people agreed with this statement, in contrast with most other provinces (the Maritimes (52%), British Columbia (49%), the Prairies (48%), and Ontario (44%)).
- More men (47%) than women (36%) feel that gardening is a chore.
- The 18-24 (53%) and 25-34 (52%) age groups have the greatest percentage of people who agreed with this statement.
- Many post-graduates (55%) feel that gardening is a chore.
- 53% of people who earn more than \$100K, as opposed to 36% of those who earn \$40-60K, agreed with this statement.

### **The neighbours' opinion of my yard maintenance is very important (50% agree)**

- People in the Prairies (65%) are much more numerous than Quebec (26%) to agree with this statement.
- 56% of people in small communities care strongly about their neighbours' opinions.
- The 18-24 age group care the least about their neighbours' opinions (37% agreed with this statement).
- 45% of people who earn less than \$40K share this opinion.
- 54% of secondary school graduates supported this statement.

### **Weeds = Intolerable (64% agree)**

- The Prairies (71%) and Ontario (67%) are the provinces where the most people find weeds in their lawns intolerable, in contrast to Quebec (54%).
- 51% of people in the 18-24 age group agreed with this statement.
- 69% of people in small communities, as opposed to 57% in rural areas, feel that weeds in their lawns are intolerable.
- 68% of secondary school graduates agreed with this statement.

### **Yellowed or ugly grass = Intolerable (62% agree)**

- The Prairies (73%) are the provinces where the most people feel yellowed or ugly grass is intolerable, in contrast with Quebec (54%).
- 54% of people in rural areas agreed with this statement.
- 51% of post-graduates versus 67% of secondary school graduates agreed with this statement.





### General Opinions on More Environmentally Friendly Gardening\*

	Totally agree	Somewhat agree	<b>Agree</b>	Somewhat disagree	Totally disagree	<b>Disagree</b>
Gardening = Harming the environment	5%	20%	<b>25%</b>	29%	47%	<b>76%</b>
Gardening = An environmental act	34%	53%	<b>87%</b>	11%	3%	<b>14%</b>
Successful landscaping = Fertilizer	15%	42%	<b>57%</b>	30%	14%	<b>44%</b>
Successful landscaping = Using pesticides	1%	18%	<b>19%</b>	36%	45%	<b>81%</b>

#### **Gardening = Can harm the environment (25% agree)**

- Quebec (13%) is the province where the least people agreed that gardening can be harmful to the environment, in contrast to British Columbia (30%).
- Compared to the 65 years and over (16%) age group, the 18-24 (44%) and 25-34 (34%) age groups have the most people who agreed with this statement.
- 20% of secondary school graduates, as opposed to 34% of post-graduates, agreed with this statement.

#### **Gardening = An environmental act (87% agree)**

- The 65 and over age group has the most people (94%) who believe that gardening is an environmentally friendly act in and of itself.

#### **Successful landscaping = Using fertilizers (56% agree)**

- Compared to the Prairies (50%) and British Columbia (49%), Quebec (63%) is the province with the most people who agreed with this statement.
- The 55-64 age bracket (62%) has the most people who confirmed that fertilizers are necessary to successful landscaping, in contrast with the 18-24 age group (37%).
- 61% of people in small communities agreed with this statement, versus 49% of people in rural areas.

#### **Successful landscaping = Using pesticides (19% agree)**

- In contrast with Ontario (24%), Quebec (12%) is the province with the least number of people who agreed with this statement.
- More men (22%) than women (17%) agreed with using pesticides.
- The 55-64 (23%) and the 65 and over (26%) age groups have the most people who agreed with this statement.



\* For respondents who garden and have a garden plot, be it at their main or second residence.



## Opinions on Chemical Products\*

	Totally agree	Somewhat agree	<b>Agree</b>	Somewhat disagree	Totally disagree	<b>Disagree</b>
Their use can be safe	9%	40%	<b>49%</b>	34%	17%	<b>51%</b>
Ought to be banned for cosmetic use	37%	34%	<b>71%</b>	23%	7%	<b>30%</b>
Natural pesticides can be harmful to the environment	12%	50%	<b>62%</b>	34%	5%	<b>39%</b>
Canadian pesticide regulation is the best in the world	5%	42%	<b>47%</b>	43%	9%	<b>52%</b>
They will still be used, even if banned	46%	50%	<b>96%</b>	4%	1%	<b>5%</b>

### **Pesticide use can be safe if directions are followed (49% agree)**

- Compared to Quebec (38%), the Prairies (59%) and Ontario (52%) are the provinces with the most people who agreed with this statement.
- More men (56%) than women (43%) expressed this opinion.
- The 25-34 age group has the fewest people (42%) who agreed with this statement, versus the 55-64 age group (54%).
- 54% of secondary school graduates, against only 38% of post-graduates, agreed with this statement.
- People who earn \$60-\$100K (56%) are the most numerous to agree with this statement, compared to people who earn less than \$40K (45%). The more people earn, the more they agree with this statement.

### **Cosmetic use of chemical pesticides should be banned (70% agree)**

- In contrast to Quebec (86%), the Prairies (60%) and Ontario (64%) are the provinces with the least people who agreed with this statement.
- More women (73%) than men (67%) agreed with this statement.
- People who earn \$60-\$100K (65%) are the most numerous to agree with this statement, in contrast with people who earn less than \$40K (76%). The more people earn, the fewer they are to agree with this statement.

### **The use of natural pesticides can pose certain risks to the environment (62% agree)**

- The 35-44 age group has the most people (67%) who agreed with this statement versus the 55-64 age group (54%) which agreed the least.



\* For respondents who garden and have a garden plot, be it at their main or second residence.



**Canadian pesticide legislation is one of the best in the world (47% agree)**

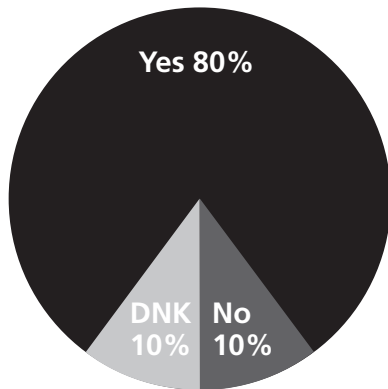
- More women (52%) than men (43%) shared this opinion.
- 55% of secondary school graduates, as opposed to only 44% of undergraduates, agreed with this statement.

**Chemical pesticides will still be used, even if they are banned (95% agree)**

- With a total of 90% of respondents in agreement, post-graduates are the least likely to be in favour with this opinion.

**Opinions on Gardening Practices\***

Do you believe that certain gardening practices can be harmful to the environment? (n = 1311)



- The 25-34 age group are the most likely (88%) to believe that certain gardening habits can be harmful to the environment.
- The more people are educated, the more they believe that certain habits can be harmful for the environment (74% of secondary school graduates, versus 83% of undergraduates, and 88% of post-graduates).



\* For respondents who garden and have a garden plot, be it at their main or second residence.



### Opinions on Environmentally Recognized Gardening Products\*

	Totally agree	Somewhat agree	<b>Agree</b>	Somewhat disagree	Totally disagree	<b>Disagree</b>
They are more expensive	24%	58%	<b>82%</b>	17%	1%	<b>18%</b>
They are less effective	6%	37%	<b>43%</b>	45%	12%	<b>57%</b>
They are easy to find	8%	43%	<b>51%</b>	45%	4%	<b>49%</b>
Little information is available	24%	56%	<b>80%</b>	16%	4%	<b>20%</b>
Conventional products have few adverse effects	3%	20%	<b>23%</b>	47%	30%	<b>77%</b>
They are easily recognizable in store	9%	42%	<b>51%</b>	5%	45%	<b>50%</b>
They are better for the environment	34%	55%	<b>89%</b>	9%	1%	<b>10%</b>

#### The price of green products is higher (82% agree)

- Only 75% of Quebec agreed with this statement.
- In contrast to the 35-44 age group (77%), the 55-64 age bracket (86%) has the most people who find green products to be more expensive than conventional products.
- 78% of people who earn \$40-\$60K concurred with this statement.

#### Green products are less effective than their conventional counterparts (43% agree)

- More men (50%) than women (37%) agreed with this statement.

#### Green products are easy to find (51% agree)

- 60% of Quebec, as opposed to 40% of people in the Prairies, agreed with this statement.
- 66% of the 18-24 age group feel that green products are easy to find.



\* For respondents who garden and have a garden plot, be it at their main or second residence.



#### **Green products are easy to use (82% agree)**

- In contrast to Ontario (79%), Quebec (89%) is the province with the most people who feel that green products are easy to use.
- More women (84%) than men (78%) agreed with this statement.
- Lack of information on what is environmentally friendly and what is not (80% agree)
- No significant differences in the data.

#### **Conventional products have few adverse effects on the environment (23% agree)**

- 27% of Ontario, as opposed to only 17% of Quebec and 18% of British Columbia, agreed with this statement.
- 30% of secondary school graduates, as opposed to 20% of undergraduates, agreed with this statement. The higher the level of education, the higher the level of disagreement over this statement.
- 27% of people who earn less than \$40K, as opposed to 19% of those who earn \$40-\$60K, think that conventional products have few harmful effects on the environment.

#### **Green products really are better for the environment (89% agree)**

- Quebec (94%) is the province with the most people who agreed with this statement.
- More women (92%) than men (86%) agreed with this statement.

#### **Green products are easily recognizable at purchase (51% agree)**

- In contrast with the Prairies (43%), Quebec (61%) is the province with the most people who agreed with this statement.
- More women (53%) than men (47%) shared this opinion.
- 59% of post-graduates, versus only 47% of undergraduates, claimed to find green products easily identifiable.

#### **There are enough green products available to meet my needs (64% agree)**

- Only 54% in the 25-34 age group agreed with this statement.
- 68% of people who earn less than \$40K believe there are enough green products on the market.





### Opinions on companies offering more environmentally friendly services\*

	Totally agree	Somewhat agree	<b>Agree</b>	Somewhat disagree	Totally disagree	<b>Disagree</b>
They are more expensive	22%	61%	<b>83%</b>	15%	1%	<b>16%</b>
They give satisfactory results	11%	73%	<b>84%</b>	15%	1%	<b>16%</b>
They are not easily accessible	14%	49%	<b>63%</b>	32%	5%	<b>37%</b>

#### They are more expensive (83% agree)

- In contrast with Quebec (76%), Ontario (86%) is the province with the most people who agreed with this statement.

#### They give satisfactory results (84% agree)

- 89% of British Columbia agreed with this statement.
- More women (87%) than men (81%) are share this opinion.

#### They are not easily accessible (63% agree)

- The Maritimes (75%), the Prairies (72%), and Ontario (67%) are the provinces with the most people who agreed with this statement. Quebec (39%) were much less likely to share this opinion.
- 54% residents of large cities find this type of company inaccessible in their area (as opposed to 69% in rural areas). The nearer we get to large cities, the fewer people there are who think that horticulture service companies are difficult to find.



\* For respondents who garden and have a garden plot, be it at their main or second residence.





### 2.3.4 Opinions on Players

#### Satisfaction with Players\*

How satisfied are you with the actions or initiatives of any of the following players to promote the development and use of green products and services [sic]? (n = 1311)

	Totally satisfied	Somewhat satisfied	<b>Satisfied</b>	Somewhat dissatisfied	Totally dissatisfied	<b>Dissatisfied</b>
Governments	2%	34%	<b>36%</b>	46%	19%	<b>65%</b>
Retail stores	3%	45%	<b>48%</b>	42%	10%	<b>52%</b>
Municipalities	4%	46%	<b>50%</b>	38%	11%	<b>49%</b>
Service companies	4%	52%	<b>56%</b>	37%	6%	<b>43%</b>
Gardeners	11%	58%	<b>69%</b>	28%	3%	<b>31%</b>
Environmental organizations	13%	54%	<b>67%</b>	26%	6%	<b>32%</b>

#### **Governments (36% satisfied)**

- The Maritimes (47%) are the provinces with the most people who are satisfied with governments' actions or initiatives to promote the development and use of green products and services.
- The 35-44 age group has the most people who are dissatisfied (72%).
- 40% of the people who earn \$60-\$100K are satisfied with government actions.

#### **Retail stores (48% satisfied)**

- No significant differences observed.

#### **Municipalities (50% satisfied)**

- In contrast to the Prairies (44%), Quebec (58%) is the province with the most people who claimed to be satisfied with municipal actions to promote the development and use of green products.
- 60% of older people (65 and over) are satisfied.



\* For respondents who garden and have a garden plot, be it at their main or second residence.



### **Horticulture service companies (56% satisfied)**

- 59% of the people most interested in gardening (8-10) are satisfied with horticulture service companies (as opposed to 53% of the least interested (less than 8)).
- 60% of the people in large cities are satisfied with the actions and initiatives of horticulture service companies.

### **Home gardeners (69% satisfied)**

- As opposed to the Prairies (75%), Quebec (57%) is the province with the least people who claimed to be satisfied with home gardeners' actions to promote the development and use of green products.
- 71% of people most interested in gardening (8-10) are satisfied with home gardeners' actions (as opposed to 66% of the least interested (less than 8)).
- More women (72%) than men (65%) are satisfied with home gardeners' actions.
- The 18-24 age group has the least people satisfied (55%) with home gardeners' initiatives.
- More people in rural areas (75%) than in large cities (65%) said they are satisfied.
- There are more people satisfied among secondary school graduates (74%) than among undergraduates (65%).
- More Anglophones (73%) than Francophones (59%) said they are satisfied.

### **Environmental organizations (67% satisfied)**

- 70% of the people most interested in gardening (8-10) are satisfied with environmental organizations (as opposed to 64% of the least interested (less than 8)).
- More women (73%) than men (61%) are satisfied with environmental organizations' actions.
- Post-graduates are the most likely (76%) to say that they are satisfied with environmental organizations' work.
- More Anglophones (70%) than Francophones (61%) are satisfied with environmental organizations' actions and initiatives to promote the development of green products and services.





### Importance of Players' Roles\*

In your opinion, what is the role of the following players in promoting the development and use of green products and services [sic]? (n = 1311)

	Very important	Fairly important	<b>Important</b>	Not very important	Not at all important	<b>Not important</b>
Governments	54%	34%	<b>88%</b>	10%	2%	<b>12%</b>
Municipalities	54%	37%	<b>91%</b>	7%	2%	<b>9%</b>
Retailers	33%	41%	<b>74%</b>	13%	13%	<b>26%</b>
Horticulture service companies	32%	42%	<b>74%</b>	13%	13%	<b>26%</b>
Home gardeners	41%	36%	<b>77%</b>	11%	12%	<b>23%</b>
Environmental organizations	44%	32%	<b>76%</b>	11%	13%	<b>24%</b>

#### **Governments (88% important)**

- People in rural areas (84%) are the least likely to feel that governments play an important role in promoting the development and use of green products.

#### **Retailers (74% important)**

- Unlike Ontario (70%), Quebec (91%) is the province where the most people feel retailers have an important role to play.
- More women (78%) than men (71%) find that retailers have an important role to play by selling green products.
- 70% of the people in the 55-64 age group think that retailers' actions are important.
- 79% of large city residents feel retailers have an important role to play, while only 67% of people in small communities share this opinion.
- 77% of undergraduates claimed that retailers play an important role.
- Far more Francophones (90%) than Anglophones (69%) think that the retailer's role is important.

#### **Municipalities (91% important)**

- More women (94%) than men (88%) feel that municipalities have an important role to play.
- People in rural areas are the least likely (88%) to share this opinion.



\* For respondents who garden and have a garden plot, be it at their main or second residence.



### **Horticulture service companies (74% important)**

- Quebec is the province where the most people (89%) said horticulture services companies have an important role to play (72% in Ontario, 69% in British Columbia, and 67% in the Prairies).
- 77% of the people most interested in gardening (8-10) find the role horticulture service companies play to be important (as opposed to 72% of the least interested (less than 8)).
- More women (79%) than men (70%) feel the role and actions of gardening service companies are important.
- The 55-64 age group has the lowest percentage (70%) that finds horticulture service company's role to be important.
- 67% of residents of small communities feel that such companies play an important role.
- Many more Francophones (88%) than Anglophones (70%) think that horticulture service companies play an important role.

### **Home gardeners (77% important)**

- As opposed to the Prairies (67%), Quebec (93%) is the province whose residents are the most likely to think that home gardeners' actions to promote the development and use of green products are important.
- 79% of the people most interested in gardening (8-10) feel the role of home gardeners is important (74% of the least interested (less than 8) shared this opinion).
- More women (80%) than men (73%) felt home gardeners' actions are important.
- The 25-34 age group has the most people who feel the home gardener's role is important.
- More people are satisfied in rural areas (75%) than in large cities (65%).
- 69% of people in small communities find the role of home gardeners to be important.
- Many more Francophones (90%) than Anglophones (72%) think that home gardeners play an important role.

### **Environmental organizations (76% important)**

- As opposed to the Prairies (67%), Quebec (90%) is the province whose residents are the most likely to think that environmental organizations' actions to promote the development and use of green products are important.
- 79% of the people most interested in gardening (8-10) felt environmental organizations' actions are important (as opposed to 74% of the least interested (less than 8)).
- More women (82%) than men (71%) think their role is important.
- The 25-34 age group has the most people (83%) who claimed that environmental organizations have an important role to play.
- Only 69% of people in small communities share this opinion.
- 73% of secondary school graduates find that environmental organizations have an important role to play.
- Many more Francophones (88%) than Anglophones (72%) think that these organizations play an important role.

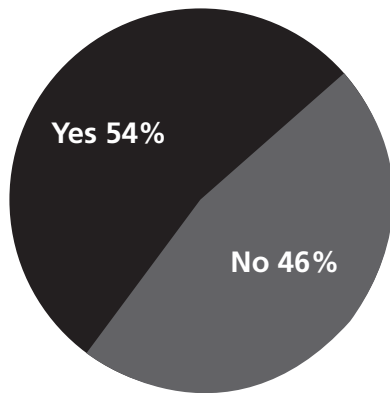




### 2.3.5 Sources of Information

#### Sources of Information\*

Do you turn to certain sources of information to find out what is beneficial or harmful to the environment [sic]? (n = 1311)



- Quebec (63%) is the province where the residents are the most likely to sources of information to find out what is beneficial or harmful to the environment.
- 61% of the people most interested in gardening (8-10) said that they look for information to find out what is beneficial or harmful to the environment.
- More women (58%) than men (49%) seek out information about what is beneficial or harmful to the environment.
- 59% of the people in the 55-64 age group use sources of information, as opposed to 40% of the 18-24 age group.
- As opposed to people living in rural areas (60%) and large cities (58%), residents of small communities (44%) are the least likely to turn to sources of information about what is beneficial or harmful to the environment.
- More Francophones (60%) than Anglophones (50%) use sources of information.

How informed are you about the health risks of using pesticides [sic]? (n = 1311)

Très informé	Plutôt bien informé	<b>Bien informé</b>	Plutôt mal informé	Très mal informé	<b>Mal informé</b>
11 %	51 %	<b>62 %</b>	33 %	5 %	<b>38 %</b>

#### Those most informed

- Ontario (66%)
- The people most interested in gardening (8-10) (70%)
- The 55-64 age group (67%)
- Post-graduates (74%)

#### The least informed

- Quebec (57%)
- The 25-34 age group (54%)



\* For respondents who garden and have a garden plot, be it at their main or second residence.

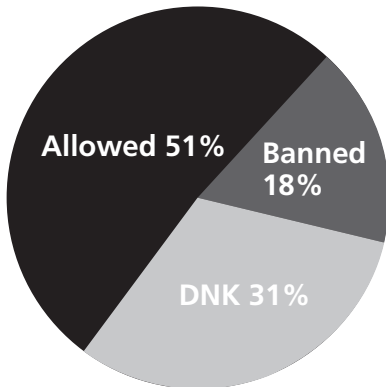


How often do you use any of the following sources of information to learn which gardening practices are beneficial or harmful to the environment [sic]? (n = 1311)

	Regularly	Occasionally	<b>Regularly + Occasionally</b>	Rarely	Never	<b>Rarely + never</b>
Television shows	10%	44%	<b>54%</b>	30%	16%	<b>46%</b>
Radio shows	4%	25%	<b>29%</b>	35%	37%	<b>72%</b>
Specialized periodicals	12%	41%	<b>53%</b>	28%	19%	<b>47%</b>
Internet	25%	42%	<b>74%</b>	19%	14%	<b>33%</b>
Store employees	17%	49%	<b>66%</b>	23%	11%	<b>34%</b>
Family, friends, neighbours	18%	54%	<b>72%</b>	21%	7%	<b>28%</b>

### Awareness of Regulations\*

Are chemical pesticides allowed or banned in your province? (n = 1311)



- The Prairies (68%) and Ontario (57%) are the provinces where people are the most likely to think that chemical pesticides are allowed (only 21% in Quebec).
- 53% of the people most interested in gardening (8-10) think that pesticide use is allowed.
- More men (55%) than women (47%) think chemical pesticide use is allowed.
- The 55-64 age group are the most numerous (88%) in thinking that pesticide use is allowed in their province.
- More people in small communities (61%) than in large cities (43%) think that chemical pesticide use is allowed.
- The more people are educated, the more they think certain gardening practices are harmful to the environment (74% for secondary school graduates, as opposed to 83% of undergraduates and 88% of post-graduates).
- Only 43% of people who earn less than \$40K think that chemical pesticide use is allowed (56% of people who earn \$60-\$100K shared this opinion).
- Many more Anglophones (58%) than Francophones (30%) think pesticide use is allowed.

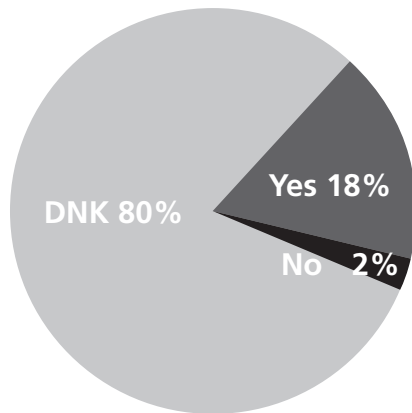
\* For respondents who garden and have a garden plot, be it at their main or second residence.



These data reflect people's perception on whether or not they are aware that regulation banning the use of chemical pesticides exists. At the time the survey was conducted, Quebec was the only province to have adopted a legislation prohibiting pesticide use. However, 146 municipalities across Canada have by-laws banning or limiting pesticide use within their city limits; this represents about 47 per cent of the total Canadian population. It would be interesting to cross these data to determine whether a provincial or municipal regulation actually exists. It would be interesting to compare data relating to perception with the actual existence of regulations.

### Awareness of Regulations\*

Is there currently a law restricting chemical pesticides in Quebec [sic]? (n = 1311)



- Quebec is by far the province with the most people who confirm that there is a law restricting the chemical pesticide use in Quebec (71% in Quebec as opposed to 5% in Ontario, 4% in the Maritimes, and 3% in the Prairies and in British Columbia) .
- More men (21%) than women (16%) know about this Code.
- There are more people in large cities (25%) than in small communities (9%) who are aware of this regulation.
- 24% of people who earn \$40-\$60K confirmed that there is a regulation limiting the use of pesticides in Quebec.
- Please note that this question was asked to all respondents, which explains the high percentage of "I don't know."

## 2.4 Segments (Segmentation of Gardeners)

We conducted a **segmentation of gardeners according to their general opinions on gardening.**

- The first step was to conduct a **factor analysis** to identify the major trends.
- This analysis showed that the opinions could be summarized by four main dimensions:
  - **I garden for pleasure**
  - **I am proud of my yard**
  - **I am in favour of chemical pesticides**
  - **Gardening is an environmentally friendly act in and of itself**



\* For respondents who garden and have a garden plot, be it at their main or second residence.



• Next, we did a **cluster analysis**, based on these four main dimensions. This analysis led us to establish four segments of gardeners:

- **The Impartial**
- **The Proud**
- **The Hedonistic**
- **The Idealistic**

Then, for each of these segments, we wrote four short profiles:

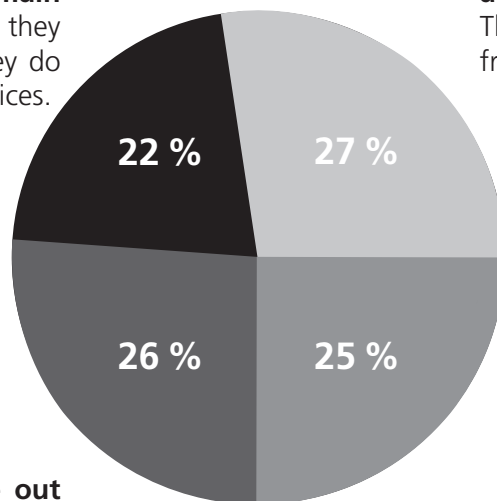
- **Socio-demographic**
- **Socio-cultural**
- **Behavioural**
- **Purchasing**

### **The Proud**

**The appearance of their yard is their main motivation.** While they enjoy gardening, they do not have green practices.

### **The Idealists**

**The pleasures of gardening are their main motivation.** They have environmentally friendly gardening habits.



### **The Impartial**

**They garden more out of necessity than pleasure.** They look for quick and easy solutions (pesticides) and do not believe in the benefits of green practices.

### **The Hedonists**

They advocate environmentally friendly gardening practices, but do not garden frequently.







### 2.4.1 The Impartial

#### Socio-demographic profile

- **Men** (60%), **younger** than the average.
- They are over-represented in the 18-34 age group.
- Nearly half (48%) have **households of three people or more**. A large majority (77%) live in single-family homes.
- More than a quarter (27%) **have undergraduate degrees**. Also, many (27%) earn **more than \$80K**.
- There are more in Ontario than in Quebec.

#### Purchasing patterns

- A large majority (73%) show **little interest in gardening**. 40% gave a score of 5 or less.
- Surprisingly, they are the **segment that spends the second largest amount on horticulture products**: on average, \$290 every year.
- **The shop more than others in big box stores**. They also shop frequently in nurseries.
- **For a third (33%), price is their primary consideration**. They also favour product effectiveness and store location. Quality and environmental impact are less important factors for this segment.

#### Gardening practices

- Compared with other segments, they **spend less time** maintaining their lawns, and even less on their flowerbeds.
- The majority (66%) **uses gas-powered lawnmowers**. This is higher than the average (57%).
- More (37%) would **use herbicides** as a solution to a dandelion invasion.
- Compared to the other segments, they were more likely (12%) to **throw away or burn their dead leaves**.

- **This segment has the lowest percentage (64%) of people who use sources of information to learn about what is good or bad for the environment**. This is lower regardless of the source of information (TV, radio, magazines, Internet, etc.).
- They are, however, aware of their ignorance and consider themselves uninformed about the health risks of pesticides.
- Nearly three-quarters (73%) **have never used green products or services**, which is much higher than the average (65%).
- Significantly, **they use more** chemical pesticides and fertilizers, do not compost, and do not have water-saving practices.
- Not only do they not have good habits, they **are also sceptical about green products**, both about their effectiveness and their benefits for the environment.
- Consequently, they would not pay more for a green product, do not believe chemical pesticides are harmful, and do not want pesticides to be banned.

### 2.4.2 The Proud

#### Socio-demographic profile

- As many **men as women (52%), older than the average**. More than a third (35%) are in the 55-64 age group.
- **Segment with smallest properties**. On average, their yards are 371 m<sup>2</sup>, as opposed to 604 m<sup>2</sup> for the whole population.
- A third (33%) **are secondary school graduates**. They have **higher than average incomes** (\$60-80K).
- There are more in Manitoba and Saskatchewan, and less in Quebec. There are also more living in small communities.





### Purchasing patterns

- The majority (67%) **show an interest for gardening**. 43% gave a score of 9 or 10.
- **People in this segment said they spent more on gardening products:** \$373 per year on average.
- They have shopping habits that are similar to the average.

### Gardening practices

- Compared with the other segments, more (20%) **use landscaping services**.
- **The spend much more time** than others maintaining their lawns and flowerbeds.
- Nearly half (46%) **regularly water their lawn**, nearly a third (30%) do so once a week.
- Nearly half (45%) would **use a herbicide** to solve a dandelion invasion.
- Also, 12% threw away their dead leaves, which is somewhat higher than the average.
- In general, they **have bad gardening practices** due to fertilizer or pesticide use and nearly no compost use.
- **They do not believe in the harmful effects of conventional products** on the environment and are sceptical about the benefits of green products.
- As a result, they would **not pay more for a more environmentally friendly product or service**.
- Also, they are **not in favour of regulating** chemical pesticides.

## 2.4.3 The Hedonistic

### Socio-demographic profile

- Women (62%), older than the average.
- More than a third (34%) are between 55 and 64.
- Nearly half (47%) hold college or university degrees. Their income is comparable to the average.

- They include slightly more renters (26%), and residents of townhouses and multi-unit buildings.
- They are more in Quebec and in rural areas, and fewer in Ontario.

### Purchasing practices

- The majority (73%) show an interest in gardening. 47% gave a score of 9 or 10.
- They have shopping habits and spending similar to the average.
- They attach less importance to price (20% as main factor) and more importance (9%) to a product's low impact on the environment.

### Gardening practices

- Compared with other groups, they **spend less time maintaining their lawns**. Many do not cut or water their grass.
- However, they **spend more time maintaining flowerbeds**.
- The majority (69 per cent) would not use herbicides for a dandelion invasion. Also, the majority (64 per cent) have good habits regarding dead leaves: they use them as mulch, compost them or have them picked up by the municipality. Note that 25 per cent say they compost their dead leaves.
- **They are more informed than other segments**. The majority uses sources of information, and refers to these sources regularly. The majority (69%) consider that they are well informed and that they have a sufficient amount of information.
- In general, they **have good gardening practices**. They use less chemical fertilizers and pesticides. **Their interest for gardening encourages them to become more involved** and to experiment with various plant types. They make their own compost, concoct home remedies for pests, and use harvested rainwater more often.





- **They believe in the virtues of green products.** They consider these products to be affordable, effective, easily available and usable.

#### 2.4.4 The Idealistic

##### Socio-demographic profile

- **Women (59%), younger than the average.** Nearly a quarter (23%) are under 35.
- **More educated than the average,** with (27%) having a university degree. Note that 13% hold a doctorate degree. **Income lower than the average,** 70% earn less than \$60K.
- They have smaller properties.
- This segment has **somewhat more renters (27%)** and tend to live in large cities (26%).

##### Purchasing patterns

- They showed **medium interest in gardening** (55% gave a score above 7).
- **They are the segment that spent the least for gardening:** \$260 per year on average.
- In general, they have **shopping habits corresponding to the average.** Note however that a respectable percentage (12%) buy in public markets.

##### Gardening practices

- Despite their modest income and smaller properties, more (10%) use a lawn maintenance service.
- Among those who do not delegate this task, **many (21%) spend no time on their lawn. Also, they water their grass less frequently:** 42% do not water their lawns and a smaller proportion (24%) water their lawns regularly.
- Compared with the other segments, they **cut their lawns using a more**

##### **environmentally friendly method.**

More (13%) use a push mower and a small proportion (46%) use a gas-powered mower.

- The majority (74%) **would not use a herbicide for a dandelion invasion** and **very few (4%) throw away or burn dead leaves.**
- In general, they have **good gardening practices.** They limit their use of chemical fertilizers and pesticides to the minimum. Like the Hedonists, they choose a wide variety of plants. They compost for use in their yard, and make home remedies for pest control.
- **They believe in the qualities of green products.** They believe these products are affordable, effective, and easy to use.
- **The majority (65%) seek out sources of information.** They watch more **television (60%)** and use the **Internet (74%)** more than other segments. Although they say they are informed in general, many (85%) believe that there is a lack of information on what is good, and not, for the environment.

## 2.5 Conclusion

We observed differences in gardening practices according to geographic sector and, especially, according to city size. In general, **gardeners who live in small communities and cities behave similarly to the average gardener on all accounts except lawns.** Small town residents' pride in their lawns is reflected in their behaviour: the cosmetic appearance of their lawns takes precedence over any environmental concerns.





Indeed, these gardeners are more likely to use gas-powered lawnmowers (though they have medium-sized properties), water more frequently, apply pesticides to resolve dandelion problems, and be more reticent to use seed types other than grass for their lawns.

**In contrast, residents of rural areas have the best gardening habits.** Many of their habits, such as lawn watering and raking, are adapted to the large size of their properties. Note, however, that they are more likely to use gas-powered lawnmowers.

- They did, however, show engagement in other activities, indicating that they take a more proactive approach: they use compost rather than chemical fertilizers, apply home remedies for pests rather than chemical insecticides, compost at home, harvest rainwater, and choose seeds other than grass for their lawns.

**In general, women have better gardening habits than men.**

- **Women show more interest in gardening than men.** Consequently, they devote more time and attention to it, and are more likely to request information about good gardening practices.
- They believe in natural products, and a larger proportion is in favour of legislation to ban chemical pesticides. Their opinions are reflected in their actions: they are less likely to use pesticides or chemical fertilizers, and a larger proportion of women make home remedies for pests.

**Age also influences gardening practices: older people have better habits than younger people.**

- **Older gardeners (55 years and over).**
  - This age group shows more interest in

gardening than younger people. It helps them stay in shape. They also devote more time and money to gardening.

- On the one hand, they follow more environmentally friendly practices than younger people. Indeed, more older people make and/or use compost as a fertilizer, use home remedies for pests, and plant indigenous plants.
- On the other hand, they are less sensitive to the harmful effects of herbicides and pesticides. A higher proportion uses such products, and most in this group believe that these products are necessary for successful landscaping. They also consider green products to be more expensive.
- They are also less aware of the environmental threats some of their gardening practices present. More consider gardening to be an environmentally friendly gesture in and of itself.
- These home gardeners' good practices are the result of ingrained habits, passed on by word of mouth. This segment of gardeners has not necessarily formed new gardening habits.
- **These findings pertain more to the men than the women in this age group.**

**There is confusion and scepticism about the harmful effects of certain chemical products, and about the benefits of more environmentally friendly products.**

- Nearly half of Canadians believe that the use of chemical products may be safe, and more than half think that natural pesticides can be harmful to the environment.





**Chemical pesticides are a recognized, simple, and quick solution.**

- More than 80 per cent believe that chemical pesticides are not necessary to successful landscaping. But, more than 25 per cent use them.
- A majority (65 per cent) have never used environmentally recognized products or services.

**The price of green products is perceived to be higher.**

- Along with quality, cost is one of the two most important purchasing criteria, and a majority of Canadians do not want to pay more for green products.

**Chemical products are highly accessible, whether they are regulated or not.**

- In Quebec, home gardeners still use chemical pesticides, despite the law in effect that bans the sale and use of certain pesticides for cosmetic use.
- Almost all Canadian gardeners believe that chemical pesticides would still be used even if they were prohibited.

Although there is much choice in the marketplace, several general findings emerge, regardless of the consumer segment.

- It appears that **many environmentally friendly gardening practices were adopted by default, not voluntarily. This is especially true for lawn maintenance.**
- **We are at the very start of the market cycle for more environmentally friendly products and services,** at a stage where little, if any, standardization exists and home gardeners are dissimilar and hardly committed when it comes to green gardening. Consequently, **there is a**

**lot of confusion around the concept of more environmentally friendly horticulture products and services.**

**Consumers who would like to adopt green habits find little support or structure, and few tools to do so.**

In terms of products in particular, it is still difficult to distinguish products that are environmentally friendly from those that are not. Also, many negative attitudes and/or realities still exist around green products, such as their higher cost, their more limited availability, and their limited effectiveness.

**Consumers have high expectations of public institutions (governments, municipalities) and, to a lesser degree, of intermediaries.**

- Consumers expect leadership on the environment, and for governments to take a clear stand. Governments ought to inform, encourage, and legislate as needed.
- The supply of products and services will play a major role in developing good habits. Retailers are the link between producers and users.

Interestingly, this study confirms that the legislation passed in Quebec (the *Pesticide Management Code*), banning the sale and use of certain pesticides in the province, changed the opinions and habits of Quebec's gardeners.

- In fact, Quebecers are certainly informed about pesticide use. A majority (71 per cent) know that pesticides are banned in Quebec. Most are likely to believe that pesticides pose a threat to human health and the environment, and even more know that it is possible to obtain satisfactory results without resorting to chemicals.
- This negative view of pesticides is of course reflected in a change of habit in





pesticide use: it is much less widespread in Quebec than in other provinces (13 per cent in Quebec while the Canadian average is 26 per cent).

- At present, the Idealists are not a noteworthy segment since they include people who hardly garden, though many have very interesting ideas about the environment.

## 2.6 Marketing Strategy and Action

In light of the results presented above, we observe that the **product and service consumer market is not homogeneous** in its values, beliefs, attitudes, and behaviours. Differences appear in purchasing patterns as well.

- It would also appear that gardening habits depend first and foremost on individuals' values. **Environmental concerns do not seem to be a fundamental value strong enough in and of itself to influence and guide gardening practices.** For example, although British Columbians are frequently cited as environmentally conscious, they consider the appearance of their lawns (mowing and watering) to be very important. This cultural value has precedence over the environment.
- **Gardening habits also depend on individual experience**, since those with the most experience are most likely to adopt good gardening practices.

It will take more than one strategy to reach Canadians about more environmentally friendly ornamental horticulture products and services. The sales and communications approach must be tailored to reach each segment of gardeners identified, i.e. the Impartial, the Proud, the Hedonists, and the Idealists.

- These are our target populations in order of priority:
  1. The Hedonists
  2. The Proud
  3. The Impartial

### 2.6.1 Strengthen the Hedonist Market

Although most have good gardening habits, some could improve their ways of doing things. Here are a few ideas to convince them:

- **Increase access to information** about more environmentally friendly products and services, and good practices. Hedonists frequently ask store staff to advise them in their purchases. To accomplish this, these "frontline players" must be won over, which could be done by inviting plant nurseries and other specialty stores to provide in-store **employee training**. It would also be useful to **supply specialized stores** with information that personnel could distribute to customers.
- The Hedonists could become **ambassadors or spokespersons** who would influence a mass movement towards better practices.
- In stores, the **focus must be on product quality**. For the Hedonists, **the environmental variable can contribute to the notion of quality** since they naturally endorse the cause.
- Note that this consumer segment is found especially in **Quebec** (36 per cent) and **Ontario** (34 per cent), as well as in **rural areas**.

### 2.6.2 Win over the Proud

**The Proud are a segment with high growth potential because they spend the most for gardening products.** They are more interested by results than in gardening itself.





- They are **sceptical** about the harmful effects of certain gardening products and practices on the environment and, therefore, must first be convinced that some gardening practices are destructive. With this in mind, their gardening pride and need to fit in must be addressed. It is therefore crucial to avoid discussing anything to do with social responsibility or to guilt trip them.
- These people consider aesthetic results to be very important.
- Highlight the results when communicating with this group.
- Emphasize the **quality/price ratio** of green products.
- Nearly half of this segment is found in Ontario (42 per cent) and the Prairies (Manitoba (9 per cent) and Saskatchewan (10 per cent)). They are also found in small communities.

### 2.6.3 Convert the Impartial

This is a **segment with high growth potential** because these people spend more than the average on gardening products. However, they will be **more difficult to convince**. Not only are they sceptical about the benefits of green products, **price is their main purchasing criteria. Their priority is saving time, energy, and money**. It is therefore important not to talk to them about good or bad gardening practices, but rather to tell them about the money they will save in choosing more environmentally friendly products and services. More will be gained by focusing on, for example, the types of plants that require less maintenance or the money they could save by following certain practices.







## 3. Interviews with Retailers and Municipalities

### 3.1 Introduction

This section of the study is designed to identify the main factors that favour and discourage the consumption of more environmentally friendly ornamental horticulture products and services by Canadian municipalities and retailers. More specifically, our objective is to better understand the commercial issues that these players face, as well as their perceptions of consumers' behaviour and expectations surrounding these products and services. Is the consumption of environmentally friendly horticultural products and services a passing trend or a lasting phenomenon? How can we contribute to making this consumption more commonplace? This study will attempt to shed light on the issue by answering these questions.

Seeing as an increase in the sales of more environmentally friendly ornamental horticulture products and services also depends on retailers (product distributors and service providers) and municipalities, we must address this issue from their perspective. Therefore, this section of the study will target municipalities because, although they do not sell ornamental horticulture products or services, they use them in great quantity, and can therefore influence the retailers with whom they do business. The ensuing results will therefore be very useful to retailers who would like to increase their sales of green products and services, as well as to municipalities who wish to buy such products and services. It is, however, important to remember that the objective of this section of our research project is not to paint a representative portrait of Canadian retailers' perceptions of environmentally friendly ornamental horticulture products and services. Rather,

it is to explore in depth the key issues related to these perceptions. The data we collected has allowed us to assess, among other things, the major role retailers play in promoting of environmentally friendly ornamental horticulture products and services.

This section is divided into two main parts: methodology and research results.

### 3.2 Methodology

This part explains the research methodology used to reach our objectives in our analysis of the consumption of green ornamental horticulture products and services. Let us make clear that, since there is no official definition of *more environmentally friendly ornamental horticulture products and services*, retailers drew on their own understanding of this type of products and services.

#### 3.2.1 Method for Data Collection and Producing the Interview Guide

Canadian retailers' perception of the consumption of more environmentally friendly ornamental horticulture products and services is a complex subject that must be dealt with systemically if we are to simultaneously study the ties between many variables. This leads us to synthesis research, the estimates of which are rather qualitative. To understand a phenomenon such as the one at hand, we must investigate many aspects. It is through this in-depth analysis, in fact, that such an approach derives its explanatory power, unlike the calculable analysis of a quantitative approach. In keeping with the objectives of this part of our research project, a qualitative approach was ideal.







Once we had decided on a qualitative approach, we had to settle on a data collection method that would be best meet this research section's requirements. In order to fulfill our objectives of deepening our understanding of the commercial issues Canadian retailers are facing with more environmentally friendly ornamental horticulture products and services, and to learn their perception of consumers' behaviour and expectations, we felt semi-structured interviews would be the most appropriate. This method proved to be relevant since it allowed us to better understand complex phenomena, such as how individuals' attitudes and perceptions are formed. The flexibility of this method also gave interviewees the freedom they needed to share their perceptions and personal experiences in detail, thus allowing us to collect quality information.

An interview guide was produced based on research questions and consultations with various project participants. We also conducted a literature review on the consumption of ornamental horticulture products and services. The guide evolved after data gathered during the first interviews.

### **3.2.2 Selection, Sampling Plan, and Interviews**

Retailers were selected according to three categories. First were product distributors, who sell ornamental horticulture products, including more environmentally friendly products. Second were horticulture service providers who offer either conventional services or more environmentally friendly services exclusively, or both. In all cases, the interviewees held the position of manager, business owner or marketing

director. In order to deepen our research, several interviews were carried out with the head office executives of a few large chain stores in the horticulture industry. It is easy to imagine that the points of view of franchisees or independent retailers can vary within the same company, while for certain large chains it is the headquarters' position that counts. Third, certain municipalities have passed regulations on pesticide use, while others have not. Interviewees were the municipality's head of horticulture, public works, or the environment.

This Canada-wide study meant that we had to interview retailers across the country. The cities targeted for this part of the study were Montreal (nine interviews), Toronto (five interviews), and Vancouver (two interviews). The goal was to carry out a high enough number of interviews in each city to paint a portrait of each category of commercial players. As we expected, the selection process proved to be more difficult in Vancouver than in Montreal and Toronto, where we carried out a few more interviews than initially planned.

We are aware of the limitations of this choice, which targeted Canada's three largest urban centres at the expense of retailers in more rural areas. However, our goal was to gather retailers' varying opinions on the issue, without any pretension to representing this population. Therefore, the results reported here will reflect only retailers in Canadian urban centres.

The interviews lasted between 40 and 60 minutes. They were semi-structured and were carried out according to the interview guide developed specifically for each category of retailers. Whether conducted by telephone or in





person, the interviews were recorded on audio cassette for archiving. They were analyzed either from transcription or notes. When interviews were conducted in person, other appropriate methods of data collection (namely, direct observation) were also used to round out the interviews. For instance, the interviewer checked for more environmentally friendly products in the establishment, listened to information given to clients about these products, and verified the location and the promotional strategy for these products.

### 3.2.3 Limitations

We have already mentioned the urban characteristic of our respondents as one of the study's limitations. The interviews allowed us to identify consensus around the perceptions and marketing practices of each category of players interviewed. Moreover, the very nature of the subject—the consumption of more environmentally friendly ornamental horticulture products and services—can be skewed by the social value accorded to environmental awareness: few people will defend being “anti-environmental.” As a result, special attention was given to putting respondents at ease so that they would express their true views and not what they thought the interviewer wanted to hear or what one is “supposed” to think.

## 3.3 Results

This part summarizes the results of the interviews conducted with sixteen retailers and municipal players in Montreal, Toronto, and Vancouver, and is divided into five main themes to facilitate reading: the general perception of commercial and municipal

players in the ornamental horticulture sector; their specific perspectives on environmentally friendly ornamental horticulture; the current state of the market; retailers' perception of consumers' behaviour; and the issue of controlled designations, and certifications in more environmentally friendly ornamental horticulture.

#### Note to reader:

In this document, the term *retailer* includes product distributors and service providers.

### 3.3.1 General Perspectives on the Ornamental Horticulture Sector

#### 3.3.1.1 From the Retailers' Point of View

The retailers interviewed see ornamental horticulture as a major pastime for Canadian consumers and a priority for many. It is a booming market, particularly in the service sector, because people are investing more and more in their gardens as soon as they have the means. In terms of product sales, trends indicate increased sales in box stores, due to these retailers' volume and prices.

Various factors influence the growth in the ornamental horticulture sector, one of which is the aging population. With ample free time on their hands, older people increasingly want to enjoy their home environment. They are motivated by the pride in having a beautiful garden and pleasant surroundings. Furthermore, the ornamental horticulture market is changing: we observe a shift in purchasing patterns, particularly for products and services that are safer for the environment and human health. Despite this, retailers and service providers notice that consumers continue to want instant results with ornamental horticulture.





### 3.3.1.2 From the Municipal Players' Point of View

The municipal players interviewed see ornamental horticulture as an area of fundamental importance for municipalities. Several reasons explain this perspective:

- The presence of healthfully maintained parks and green spaces contributes greatly to citizens' quality of life, especially in large cities.
- Ornamental horticulture can be a political platform for elected officials since citizens want to live in a beautiful city.
- Many cities participate in landscaping contests, and most have services devoted to ornamental horticulture. Budgets dedicated to ornamental horticulture illustrate municipalities' awareness of this sector's importance.
- Given the number of parks and green spaces they maintain, municipalities must emphasize quantity over quality when it comes to maintenance. They seek an acceptable standard that they then apply to their territory.

### 3.3.2 Specific Perspectives on More Environmentally Friendly Ornamental Horticulture

For retailers and municipal actors, more environmentally friendly ornamental horticulture is more a question of changing habits and methods than of using green products. Interviewees point out that many consumers have a biased view of what constitutes a healthy lawn—their horticultural approach is reactive, not proactive. In other words, people's reflex is to apply massive amounts of chemical products to tackle a problem—an infestation of weeds, dandelions or bugs, for example—without trying to identify the source of the problem.

According to retailers, however, more environmentally friendly ornamental horticulture is defined by a thorough understanding of soils, the environment and its ecosystems. The green solution is therefore achieved by creating sustainable garden arrangements that put the right plant in the right place according to each plant's characteristics. Several interviewees, particularly municipalities, raised the topic of cultivation techniques. Municipalities placed greater emphasis on reducing to a maximum, in recent years, their use of toxic products for city green space maintenance; now, such products are used only in rare cases.

For the retailers interviewed, environmentally friendly ornamental horticulture is defined as having "low, reduced, or no impact on the environment." They also spoke of products that are curative and non-chemical. Retailers list insecticide soaps and compost as the most frequently used environmentally friendly ornamental horticulture products.

Every interviewee bemoaned the consumer's ignorance about this issue. Consumers are not able to adopt new methods because they do not understand the reciprocal relationship between the environment, vegetal physiology, and themselves. Furthermore, some point out that consumers rarely walk the talk: people want beautiful lawns and landscaping, but are not ready to invest the time or money to achieve it in an environmentally friendly manner.





### **3.3.3 The Current State of More Environmentally Friendly Ornamental Horticulture in Canada: Facts and Challenges**

A large majority of the retail interviewees feel that more environmentally friendly ornamental horticulture has a promising future for many reasons, mostly social, economic, and legal.

- Retailers' and service providers' main argument is that consumers have mounting concerns about the products they use and the effects of chemical products on their health, which prompts them to change their consumption habits and preferences. This trend fits generally into the responsible consumption movement: consumers are becoming aware of their role as individuals and that this role is played out in their choice of responsible and sustainable purchases.
- The growing body of legislation, particularly by-laws governing the cosmetic use of pesticides in most large Canadian cities, is a significant factor in determining the future of more environmentally friendly ornamental horticulture. Indeed, many interviewees emphasize that consumers no longer have the option but to become more environmentally friendly in their landscaping and garden maintenance.
- Retailers and service providers know that that this sector can maximize their business opportunities and profits. This is one of the main reasons behind the bright prospects of more environmentally friendly ornamental horticulture.

However, according to the retailers and service providers interviewed, the following conditions must be met if ornamental horticulture is to develop.

- The effectiveness of products and, to a lesser extent, ease of use. Clients look first and foremost for products that solve their horticultural problems, as well as for professional landscaping services that provide them with beautiful gardens. Certain retailers even foresee a phasing-out of plants and high-maintenance landscaping.
- More effective environmentally friendly products.
- Affordable prices.
- Consumer education.

#### **3.3.3.1 Retailers' Contribution to the Development of More Environmentally Friendly Products and Services**

Product distributors feel that they have an important role to play in the development of more environmentally friendly products and services.

- They must first make more environmentally friendly ornamental horticulture products and services available to customers in their stores.
- They must then inform consumers of the existence of new products and demonstrate how they benefit the environment and health. This information can be distributed concurrently by employees on the floor, and through signs in store departments and on the company website.





However, this work must be done in concert with other parties, notably the government, which should facilitate the authorization of alternative products.

The service providers all agreed that they can contribute to the development of more environmentally friendly ornamental horticulture.

- The main contribution of service providers is most definitely consumer education, which has a greater impact if the landscaping or maintenance service is personalized, or if the client communicates directly with the provider. Education deals with both :
  1. Understanding environmentally friendly landscaping and maintenance, i.e. taking ecosystems and soils into consideration.
  2. The much more technical nature of environmentally friendly maintenance: the workload is greater and calls for more knowledge. This expert work requires an analysis and consideration of the specific horticultural problem, unlike the application of pesticides, which is a systematic and much more easily accessible approach.
- Service providers also conduct research and development to fine-tune landscaping and maintenance techniques that are more environmentally friendly.

The municipal players interviewed were also fully aware that they have a key role to play in the development of environmentally friendly ornamental horticulture. Generally, cities know that they must set a good example as much as their means allow: they have the knowledge, the available personnel, and large green spaces to maintain. Furthermore, it is the role of the public sector to give their citizens the best

possible quality of life, and ornamental horticulture is part of that equation.

- Their role is first to pass municipal by-laws that limit or ban the cosmetic use of pesticides and fertilizers. In Quebec, for example, certain municipalities feel that the *Pesticide Management Code* is not restrictive enough, and so they have tried to pass more severe municipal regulations.
- Their role is then to distribute information to citizens on the harmful effects of certain chemical products. In fact, they must begin with this stage even before adopting regulation. Information can be transmitted by mail (city newsletters), on the city's website, and by posting in city parks.

### **3.3.3.2 Deterrents to the Development of More Environmentally Friendly Ornamental Horticulture**

All the commercial players interviewed cited the following as deterrents to increasing the consumption of environmentally friendly product and services.

- The first, mentioned by both retailers and service providers, is low product effectiveness. Consumers are highly sceptical about green ornamental horticulture products.
- Consumer scepticism is aggravated by the phenomenon of "greenwashing," which causes confusion about what is environmentally friendly and what is not.
- There is also the cultural problem already identified by these two categories of players: consumers' perception and ingrained habits. A beautiful lawn is still frequently defined as a lawn that has no weeds and is as uniformly green as a golf course.





- The retailers frequently mentioned the problem of registering and authorizing suppliers' newly developed products. Lengthy waits due to bureaucracy are often discouraging to producers, who think twice before investing in new product development.
- The high prices discourage consumers, according to many municipalities, although this economic barrier is sometimes more perceived than real.

### **3.3.3.3 Is the Consumption of More Environmentally Friendly Ornamental Horticulture Products and Services a Lasting Phenomenon or a Passing Trend?**

All the categories of players interviewed agreed that green ornamental agriculture is a lasting phenomenon that will become increasingly commonplace over the years to come. Many among them felt that it is here to stay since it is a trend that has been observed for several years and one that is unlikely to suddenly disappear. Some think that conventional and environmentally friendly horticulture will have the same importance, while others feel that environmentally friendly horticulture will exceed the conventional sector in the next ten years.

Retailers and service providers admitted that they initially began offering more environmentally friendly products and services in response to customer demand.

The majority of the retailers expressed the belief that increased sales of environmentally friendly products would first be felt in large product distribution chains because box stores already hold large market shares and offer a wider range of products than specialty stores.

They also mentioned that there will be an increase in sales in specialty stores because the purchase of more environmentally friendly products requires personalized advice that clients receive more readily from specialty stores and garden centres.

### **3.3.3.4 Are More Environmentally Friendly Ornamental Horticulture Products and Services More Expensive than Conventional Products and Services?**

The retailers seemed to record similar profit margins for their green and conventional ornamental horticulture products. These margins are defined according to the category of product and vary greatly according to use. However, environmentally friendly products are more expensive to purchase, and their price at sale is therefore higher for consumers. Retailers insisted that there would be no long-term commercial advantage to charging more for green products.

However, the service providers said they charge more for green services than for conventional services. This can be explained by the fact that environmentally friendly services require more work.

Something that sets environmentally recognized service providers apart is that they do not have a list of standard prices to give potential clients. This is because each service is unique and specific to the conditions of the setting and its already established plants.





### **3.3.3.5 Marketing More Environmentally Friendly Ornamental Horticulture Products**

Half of the distributors interviewed grouped their green products in a separate department, while the rest placed these products in the aisles with conventional products according to type.

One reason some stores group more environmentally friendly products is that these products are sold off the shelf while certain chemical products (pesticides) are kept under lock and key. For some retailers, off-the-shelf sales increase the sales of more environmentally friendly products, particularly in big box stores where it is more difficult to find employees for product information. However, a specialty store retailer explained that clients do not spontaneously seek out natural products, and that it is only after discussion with an employee on these products' benefits that they opt for this kind of product.

These considerations raise an important point: the importance of having trained and available personnel in retail stores as a way of promoting more environmentally friendly ornamental horticulture products, and thus of increasing sales in this sector.

Retailers who display green products and their conventional counterparts on the same shelf said that, just by seeing products placed side by side, consumers realize that alternatives do exist and that they can therefore choose another product. Keeping in mind that the interviewees believed that green products will be found more and more in specialized stores, big box stores especially should not place green products in a separate section since this would prevent clients from comparing them with conventional products.

Retailers do not necessarily use detailed in-store signage. This is especially true in big box stores: given their wide range of products, it is virtually impossible to have detailed signage for each product sold.

### **3.3.3.6 Challenges Facing Retailers and Service Providers**

There are few challenges facing retailers, since, in some cases, conventional product suppliers also provide more environmentally friendly products. However, one retailer indicated that variations in the different provincial legislations as being a complication that adds to the difficulties of product authorization. As well, the special storage conditions of certain more environmentally friendly products (nematodes, for example) are limitations for small stores.

The challenges service providers face have already been mentioned: setting rates for services and justifying higher rates to consumers; smaller profit margins; ongoing consumer education, and; the necessity of knowledge mastery.

## **3.3.4 Retailers' Perception of Consumer Behaviour**

This part provides the retailers' perceptions of consumer behaviour.

### **3.3.4.1 What Types of Horticultural Products and Services Do Clients Ask for the Most?**

Consumers tend to be proactive in seeking out landscaping or maintenance services. Clients will have already found out about the type of services a company offers before calling for more information. However, certain clients do call environmentally friendly companies for conventional services, and that is when the provider's role as educator begins.







#### **3.3.4.2 Do Clients Who Call on Service Providers Prioritize Effective Results over the Environment?**

The answer is almost always affirmative, except for clients who seek out companies providing environmentally friendly services. In this case, some green service companies try to educate their clients by introducing the notion of “controlling” problems rather than “eradicating” them, while others refuse to do business with this kind of client. In general, we noted that clients who chose conventional services are those who want to see immediate results in their yards or who want to know ahead of time the precise cost.

#### **3.3.4.3 What Types of Horticulture Services Are the Most Beneficial for Service Providers?**

The providers interviewed agreed that more environmentally friendly ornamental horticulture is better for service providers, the benefits being mostly commercial and image related, since green or responsible companies are well thought of these days.

Many providers and retailers pointed out that more environmentally friendly horticulture represents the future and long-term growth in the sector, and that companies who persist in not becoming green in their garden maintenance and landscaping will be left behind, sooner or later, by changes in consumer preferences. Moreover, conventional companies are subject to more and more restrictions from municipal and provincial regulations.

Not all providers are ready to compromise their profits by offering more environmentally friendly products or services, and they expect at least to be able to make an acceptable profit.

#### **3.3.4.4 Does Offering More Environmentally Friendly Services and Products Reflect Sincere Concern for the Environment?**

The retailers were nearly unanimous in answering this question. According to them, selling more environmentally friendly products and services does not reflect the retailer’s sincere concern for the environment.

Some thought that it is a market trend like any other, and that retailers are “going green” in response to customer demand. Retailers in particular observed that it is a business opportunity.

Thus, certain companies carry out major marketing campaigns for more environmentally friendly horticulture products with names that sound “environmental” or set up a green website, though in reality they have not modified their practices.

#### **3.3.4.5 Can Providers and Retailers Influence their Customers to Choose One Type of Horticulture over Another?**

A first general observation is that service providers have a direct and privileged communication link with their clients and, consequently, can influence consumer choices much more easily than retailers.

All agreed that awareness raising and education are the most effective means of making consumers understand the benefits of environmentally friendly ornamental horticulture products and services for both their health and the environment. Education happens by explaining environmentally friendly horticulture and demonstrating







that it is possible to have a nice lawn without resorting to chemical products.

Certain providers send sceptical clients to visit environmentally designed gardens so that they can see for themselves that environmentally friendly maintenance can indeed have good results.

#### **3.3.4.6 What Types of More Environmentally Friendly Horticultural Products are the Most Known or Sold on the Market?**

Compost, natural fertilizers (e.g. chicken manure), potting soils, herbicides, nematodes, insecticide soaps, and soil aeration seem to be the most widespread environmentally friendly horticultural products or services on the market. According to retailers, there are several factors explaining this:

- They are directly recommended by eco-advisors hired by municipalities to advise citizens.
- The products resolve primary problems, not major ones (insect infestation, diseases, etc.).
- The appearance of blue-green alga in Quebec has been connected with the excessive use of chemical fertilizers.
- Garbage quotas in some cities have made consumers turn to alternative waste elimination solutions (e.g. composting organic matter).
- Herbicides are big sellers because consumers do not tolerate weeds in their yards.
- Insecticide soaps have long been sold on the market. Some brands have a good reputation (e.g. Safers).

#### **3.3.4.7 What Difficulties Are Encountered in Promoting More Environmentally Friendly Products and Services to Consumers?**

Most retailers feel that there are fewer and fewer obstacles in promoting more environmentally friendly ornamental horticulture products. However, as we mentioned earlier, these products are often more expensive to purchase, and their effectiveness is less successful. Consequently, customers may lose confidence in this type of product.

The retailers interviewed also stated that their personnel do not always have the time to explain environmentally friendly horticulture to customers in detail. Furthermore, they must give good reasons for the higher price in order for consumers purchase their services afterwards.

Finally, people are set in their ways and it is difficult to make them change, especially when many of the proposed green products and methods require more specialized know-how and money.

#### **3.3.4.8 What Influences Customers to Ask for More Environmentally Friendly Horticulture Products or Services?**

The retailers interviewed named two main reasons: protection of the environment first, and human and animal health second. Moreover, people who have suffered from serious illnesses, such as cancer, are particularly aware of the benefits of more environmentally friendly horticulture products and services.





### **3.3.4.9 What are the Key Obstacles that Prevent Consumers from Purchasing More Environmentally Friendly Ornamental Horticulture Products and Services?**

The retailers interviewed identified the following five key obstacles:

- Consumers' need for immediate results.
- Consumers' perception of what constitutes a healthy and beautiful lawn, and their pride in having a "perfect" lawn.
- More environmentally friendly horticulture products do not have the same directions for use as conventional products.
- The mixed effectiveness of green products.
- Their higher price.

### **3.3.4.10 What Is the Standard Profile of Consumers of More Environmentally Friendly Ornamental Horticulture Products and Services?**

From a retailer's point of view, the standard profile of the consumer of more environmentally friendly ornamental horticulture services and products is as follows:

Customers who buy only more environmentally friendly ornamental horticulture products and services:

- Have a connection with the environment and a concern for human and environmental health. These people have gradually changed their habits: they use biodegradable phosphate-free detergents, eat healthy and organic foods, recycle, compost, etc.
- Are generally women.
- Have children or grandchildren.
- Have a high level of education (post-secondary).
- Have high incomes.
- Are between 30 and 60 years old.

Customers who buy only conventional ornamental horticulture products and services:

- Are generally men.
- Are over 50-60 years.
- Have modest incomes.
- Are owners of large, prestigious homes.
- Emphasize the appearance of their gardens. They are convinced that green products are ineffective and do not want to try them since they are satisfied with conventional products' rapid results.

Customers who are impartial and buy either more environmentally friendly or conventional products and services

- Make their purchases mostly out of habit and without being aware of alternatives; it is not done intentionally.
- Are middle class, aged 30 and over.
- Have young families.
- Are real estate developers who build apartment buildings and only look for the lowest possible price.

This last category of consumers should be the target of awareness-raising and educational activities, since it is made up of consumers who can be easily convinced with compelling arguments.

## **3.3.5 Designations and Certifications in More Environmentally Friendly Ornamental Horticulture**

This part looks at the issue of designations and certifications in environmentally friendly ornamental horticulture.

### **3.3.5.1 Designations**

All the players interviewed agreed that consumers do not understand the difference between *environmentally friendly*, *natural*, *green*, and *organic* in





ornamental horticulture. They also felt that consumers pay little attention to these designations because many do not trust such labels. Service providers and retailers themselves are not particularly at ease with these designations.

Nonetheless, we can identify several general perceptions from the retailers' answers:

*Natural products:* made from all-natural and non-artificial or non-synthetic ingredients.

*Organic products:* made with organisms found in nature and not treated with pesticides.

*Environmentally friendly products:* does not mean much, is a vague expression; refers to products that have less impact on the environment.

Service providers and retailers all said that designations should be standardized and, especially, that they should be regulated to free them from misuse to give them a legitimate meaning.

### **3.3.5.2 Certifications**

In Quebec, we note that service providers are generally unaware of Horti Éco certification. Consumers also seem unaware of this certification at the present time which means that Horti-Éco-certified providers are unable to benefit from it financially. The certification has, however, sparked significant interest in other provinces, particularly in Ontario, where there is no equivalent.

Service providers nonetheless felt the certification has a real added value for landscaping and maintenance companies, because it recognizes the expertise and

professionalism of certified companies. It also gives providers increased visibility and attracts clients looking for proof of the ecological integrity of more environmentally friendly services. This is all the more the case given that the certification process requires taking courses and passing an exam, which guarantee the service provider's competency and professionalism.

Finally, retailers agreed that there is currently major greenwashing surrounding environmentally friendly ornamental horticulture, causing confusion about which product and service are truly green.

One service provider felt that the situation will deteriorate if the designations "environmentally friendly" and *organic* are not regulated. This has been done for agriculture, so why not for horticulture?

## **3.4 Conclusions derived from interviews with retailers and municipalities**

The retailers' answers confirm the perceptions collected from consumers and presented in the second section of this report. Canadians have an undeniable passion for gardening and the ornamental horticulture sector does indeed have a promising future.

In addition, the retailers identified the main obstacles to expanding the use of more environmentally friendly horticultural products and services.





### **3.4.1 Responsibility for Developing the Offer of Environmentally Friendly Ornamental Horticulture Products**

According to the retailers interviewed, responsibility for developing the offer of such products falls to several players. They include:

- Governments, who ought to legislate and accelerate the development of alternative products by working to reduce, among other things, the wait periods for product authorization (especially for products already sold elsewhere, such as in the United States and Europe) and the legislative variations between provinces. The government should also grant funding for the research and development of more environmentally friendly products.
- Service providers, who ought to continue to educate their customers.
- Producers, who ought to diversify their product offer.
- Retailers, who ought to distribute a wider range of more environmentally friendly ornamental horticulture products.
- Consumers, who ought to have the responsibility of stimulating the offer by asking for these products in retail stores.

Though each party has its role to play, and some at higher and more decisive levels than others, the players interviewed generally agreed that producers, distributors, and governments must work together to bring about change.

### **3.4.2 Retailers' Recommendations to Other Players in the Sector**

This section pertains to recommendations from retailers and municipal players

#### **3.4.2.1 Advice to Suppliers and Producers of More Environmentally Friendly Ornamental Horticulture Products:**

- Realize that green horticulture is a lasting phenomenon. Do not go against the flow. Instead, be the leader of the pack by developing new products to secure market shares. Do not be stingy on investing in research and development.
- Provide products that truly are environmentally friendly.
- It is of vital importance to test products and prove their efficacy.
- Inform consumers and especially garden centres (the direct clients of suppliers and producers) that new alternative products are on the market.
- Focus marketing plans on product effectiveness.
- Balance out prices over time to make products more affordable.
- Move to large urban centres where most customers live.
- Make new products available through large distribution chains and not just in garden centres.
- At the marketing level, promote the benefits of a healthfully maintained lawn.

#### **3.4.2.2 Advice to Public Organizations**

Retailers felt that one organization is needed to take responsibility for educating the public about environmental issues, and specified that this role be performed by environmental groups. In general, these environmental groups do good work, especially in terms of raising citizens' awareness.

Here are several possible actions that would reinforce citizens' level of awareness and education:

- Present tangible solutions that work, and avoid any philosophical discourse on





protecting the environment.

- Focus education campaigns on concrete and easy steps.
- Emphasize the benefits of more environmentally friendly products, and connect them to daily life.
- Strive to work jointly with producers, retailers, and municipalities.
- Hold information sessions in garden centres with, for example, workshops on soil analysis.

Environmental groups ought to be more visible in the media in order to better communicate their messages and thus create greater impact. And, to successfully achieve change, they must also demonstrate their leadership by remaining open to cooperation with other parties.





## 4. Recommendations

### Notes to reader:

Please note that respondents have expressed their personal perceptions of green or more environmentally friendly products and services.

Note that since there is not yet an official definition of “green” or “more environmentally friendly” products and services, respondents responded according to their personal interpretations of these terms.

In this document, the term *retailer* includes product distributors and service providers.

As we saw in the literature review, the interviews with retailers, and the national consumer survey, the consumer market is not homogenous in its values, beliefs, and attitudes. Indeed, individuals’ gardening habits depend on their values. On the one hand, environmental concerns do not seem to be a fundamental value strong enough in and of itself to influence and guide gardening practices. On the other hand, despite the growing popularity of gardening, the motivations behind this leisure activity vary. Ornamental horticulture appears to be primarily prompted by a desire to beautify and improve the home. Moreover, around half of Canadians who garden are concerned about what the neighbours think of their yards. We must note, however, that many Canadians follow good gardening practices.

The key factors influencing respondents’ purchase of ornamental horticulture products and services are quality and price. Although the environment is mentioned by a small portion of gardeners as a reason for their purchases of horticulture products and services, price remains a major issue. While a large majority of respondents think that more environmentally friendly products truly are better for the environment and that green service companies provide satisfactory results, more than half admit to not wanting to pay more for these products and services.

Although environmentally recognized service companies are perceived as difficult to access, green products are much easier to find. Opinions are divided, however, when it comes to the effectiveness of more environmentally friendly products in comparison to their conventional counterparts.

Government is seen to be the most important player in taking responsibility for promoting the development of more environmentally friendly ornamental horticulture products and services. It is followed by municipalities, service companies, and retail stores. For the time being, Canadians are not satisfied with government actions to foster the development of more environmentally friendly products and services. They consider that municipalities and retail stores are much more proactive.

These observations show that there is not just one strategy for increasing the consumption of more environmentally friendly ornamental horticulture products and services. Each consumer segment should be approached differently, according to their values, beliefs, concerns, behaviours, and purchasing habits.

The development strategy for more environmentally friendly products and services should be more based on the differences between consumers’ behaviours and perceptions, as the CROP survey firm suggests. This strategy calls for action from retailers (price, diversity of supplies, accessibility), civil society groups (communications and influence of public opinion), and government (communications, labelling, support in developing the product and service offer).





## 4.1 Recommendations for Governments

Governments should legislate and accelerate the development of alternative products by working to reduce, among other things, the wait periods for product authorization (especially for products already sold elsewhere, such as in the United States and Europe) and the legislative variations between provinces.

Governments must legislate and accelerate the development of alternative products, among other things, by carrying out or funding national education campaigns.

The government should also grant monies for the R&D of environmentally friendly products.

Thus, Équiterre makes the following recommendations for governments:

- 4.1.1 Regulate the sale and use of products that are harmful to human health and the environment.
- 4.1.2 Re-enforce the *Pesticides Management Code* in Quebec and, in other Canadian provinces, adopt regulation based on this Code, just as the Ontario did in 2008. Legislation certainly influences pesticide use, as the results in Quebec after the application of the *Pesticide Management Code* demonstrate.
- 4.1.3 Carry out or fund national communications campaigns to raise awareness and educate Canadians about the particularities and benefits of environmentally friendly horticulture and encourage them to change their perceptions and expectations of landscaping.
- 4.1.4 Draft national and provincial regulations that require service providers to respect the definitions of *organic*, *green*, and *natural*, and that ensure monitoring.
- 4.1.5 Work in collaboration with professional associations, and consumer and environmental groups to find an appropriate definition of environmentally friendly horticulture products and services that takes their impact on the environment and on society into account.
- 4.1.6 Ensure national and provincial mandatory labelling of all horticultural products sold in Canada that use the designations *organic*, *green*, and *natural*.
- 4.1.7 Study the possibility of a unique logo indentifying more environmentally friendly products and services in Canada.
- 4.1.8 Study the possibility of accelerating the authorization process for green products.
- 4.1.9 Fund credible and recognized certifications for more environmentally friendly ornamental horticulture in order not to penalize companies offering such services.
- 4.1.10 Add a clause to the *Building Code* ensuring that the grounds around new constructions are adequately prepared for planting and landscaping.
- 4.1.11 Establish programs that reward retailers of environmental products and services that are making an effort to encourage sales of environmentally recognized products.





## 4.2. Recommendations for Municipalities

Équiterre makes the following recommendations for municipalities:

- 4.2.1 Adopt municipal by-laws banning gardening practices that are harmful to the environment (water waste, cosmetic use of chemical pesticides) in favour of those that are environmentally friendly (subsidizing household composters).
- 4.2.2 Establish, in cooperation with professionals, gardening and landscaping demonstration sites that are designed and maintained environmentally.
- 4.2.3 Distribute information to educate and encourage citizens to adopt good gardening habits.

## 4.3 Recommendations for Retailers

Retailers (retailers and service providers) have a crucial role to play in increasing the consumption of more environmentally friendly ornamental horticulture products and services. Here are several possible actions that they might take. Thus, Équiterre makes the following recommendations for municipalities.

- 4.3.1 Along with professional associations, join consumer advocate groups and environmental groups so that Canadian regulation protects the designations *organic*, *green*, and *natural* in the ornamental horticulture field. Not doing so might compromise the entire chain's credibility.

- 4.3.2 Establish studies and benchmark tests in partnership with research centres and universities to demonstrate the effectiveness of green products.
- 4.3.3 Improve access to and the quality of information on more environmentally friendly products and best practices in horticulture. Since customers frequently consult personnel in the store, it is important to train employees so that they may guide and advise customers. Information could also be posted in store departments or on company websites.
- 4.3.4 In cooperation with professional associations, environmental groups, and governments, provide stores with information that employees can hand out to consumers.
- 4.3.5 Contribute to education and awareness-raising efforts carried out by governments, municipalities, and environmental groups.
- 4.3.6 Continue educating clients given their privileged and trust-based relationships, and perceived as being credible, particularly in terms of the time and money that more environmentally friendly products, practices, and services require.
- 4.3.7 Give consumers a wider choice of environmentally recognized products, including new products, in both large distribution chains and specialty stores.
- 4.3.8 Receive recognized certification, particularly those who already have green practices.
- 4.3.9 Ask retailers to adopt in-house sustainable development policies that would feature more







environmentally friendly products in their stores. These products must be highly visible.

- 4.3.10 Establish a forum in which service providers can discuss best practices. To do so, professional associations could create an advantageous network.

#### **4.4 Recommendations for Civil Society Organizations (Unions, Environmental Groups and Consumer Advocacy Groups)**

Thus, Équiterre makes the following recommendations:

- 4.4.1 As a group, effectively represent citizens at the various levels of government involved so that the government implements and supports the preceding recommendations.
- 4.4.2 Present concrete, affordable, and effective solutions in cooperation with professional associations, retailers, and municipalities. For example, produce a small and easily accessible (web-based) guide demystifying the various options available on the market.
- 4.4.3 Actively participate in a national awareness-raising campaign on the advantages of more environmentally friendly products and services, and teach citizens to adjust their aesthetic expectations.
- 4.4.4 Continue educational and awareness-raising activities for Canadians on the harmful effects of certain products and gardening practices, and advocate the benefits of more environmentally friendly alternatives.





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