

**Mississippi Mills Household  
Lawn and Garden Chemical Use  
Survey Results**

October, 2007

Submitted to:  
The Town of Mississippi Mills

**Carleton University Survey Centre, CUSC**  
1125 Colonel By Drive, Ottawa, Ontario, Canada, K1S 5B6  
Telephone: (613) 520-2600 (extension 7420)

## Table of Contents

<b>INTRODUCTION .....</b>	<b>3</b>
<b>METHODOLOGY .....</b>	<b>3</b>
<b>EXECUTIVE SUMMARY .....</b>	<b>4</b>
<b>RESULTS AND ANALYSIS .....</b>	<b>5</b>
Pesticide users.....	5
Non- Pesticide Users.....	7
All respondents .....	7
<b>Demographics .....</b>	<b>9</b>
<b>Bi-Variate Results and Analysis.....</b>	<b>11</b>
Pesticide use .....	11
Gender .....	13
Age .....	16
<b>SUMMARY AND CONCLUSIONS .....</b>	<b>17</b>
<b>Appendix I - Questionnaire .....</b>	<b>18</b>

## Introduction

The Town of Mississippi Mills, in consultation with The Carleton University Survey Centre (CUSC), conducted a survey of residents to determine use and knowledge regarding lawn and garden chemical pesticides.

## Methodology

The questionnaire was designed by the CUSC, in consultation with the Town of Mississippi Mills, and included questions about pesticide use, perceptions of the effects of lawn and garden chemicals, support for by-laws regulating the use of lawn and garden chemicals and demographic information. The town administered the questionnaire. All private dwelling residents of the town were mailed a questionnaire. Respondents were asked to drop the completed survey off at specified locations.

Of the 4,936 questionnaires sent out to all residents living in private dwellings, 543 were returned representing a response rate of 11%. An 11% response rate for surveys using this methodology is regarded as normal. Surveys of this size are considered accurate within 5 % nineteen times out of 20.

## Executive Summary

- The residents of Mississippi Mills are not heavy pesticide users and are open to the idea of a bylaw which would regulate their use.
- Pesticide users were more likely to be older males.
- The majority of pesticide users felt that pesticides were at least 'somewhat' harmful to their families and to the environment.
- Pesticide users were also open to the idea of some type of bylaw which would regulate pesticide use.
- The most common source of information about pesticide use for pesticide users were professionals at garden centres.
- Non-pesticide users held stronger sentiments regarding the effects of pesticides on their families and the environment.
- The most common reason non-pesticide users gave for not using pesticides was the environment.
- Non-pesticide users were more likely to get their information about pesticides from family, and friends or gardening books than garden centres.
- Females were much more likely to be non-pesticide users and were much more sensitive to the effects of pesticides on the environment and their families.
- Females were also less likely to say that pesticides were effective than males.
- Respondents between the ages of 35 to 54 were most likely to think pesticides were very harmful to the environment and their family.
- Older males should be targeted for education on pesticide use and its detrimental effects. Since garden centres are the most common source of information for pesticide users, they should also be targeted as the best outlet for education on the issue.

## Results and Analysis

The report is organized into two main sections which include overall results for all questions and all relevant bi-variate analysis.

### Pesticide users

All respondents were asked to indicate how often they had used chemicals on their lawn or garden in the past year, Table 1.

**Table 1: Pesticide use**

	%
Monthly	.4
3-4 times a year	8.1
1-2 times a year	27.4
Not at all	64.1

Totals may not add to 100 due to rounding

The majority of respondents said they had not used lawn or garden chemicals in the past year. Just under one-third of respondents said they had used chemicals at least one or two times a year. Less than one percent of respondents used pesticides monthly.

Respondents who indicated any pesticide use in the past year in the first question were then asked to indicate the purpose of using lawn and garden chemical products, Table 2. For this question multiple responses were possible.

**Table 2: Purpose of chemical lawn and garden products**

	# of responses	%
Preventing weeds	91	24.7%
Preventing insects	35	9.5%
Preventing mould or fungus	23	6.3%
Killing existing weeds	139	37.8%
Killing existing insects	64	17.4%
Killing mould or fungus	16	4.3%
Total	368	100%

The one hundred and ninety-seven respondents who had used chemicals at least once a year or more, (36%), generated three hundred and sixty-eight responses to this question. Killing weeds and preventing weeds were the most common uses of chemical products. Killing and preventing fungus or mould were the least common uses of chemicals. The majority of respondents said they had applied these chemicals themselves, Table 3.

**Table 3: Application of chemicals**

	%
Lawn care company	12.9
Yourself	76.8
Another person	7.2
Other	3.1

Totals may not add to 100 due to rounding

Pesticide users were then asked how effective these products were, Table 4, and whether they would be likely to use non-chemical forms of pest and disease control if they were more accessible, Table 5.

**Table 4: Effectiveness of products**

	%
Very effective	59.6
Somewhat effective	36.3
Not very effective	3.6
Not at all effective	.5

Totals may not add to 100 due to rounding

The majority of pesticide users found these products to be ‘very’ effective. Less than 5% of the respondents said these products were ‘not very’ or ‘not at all’ effective.

**Table 5: Likelihood to use non-chemical pesticides**

	%
Very likely	47.6
Somewhat likely	29.4
Not very likely	12.8
Not at all likely	5.9
Already use them	4.3

Totals may not add to 100 due to rounding

Despite the perceived effectiveness of their current pesticide choices, over three-quarters of pesticide users said they would be ‘somewhat’ or ‘very’ likely to use non-chemical forms of pesticides. Close to twenty percent said they were ‘not very’ or ‘not at all’ likely to use them. Less than five percent of respondents said they already used them.

Generally, the majority of respondents are not using pesticides. Of those that do use pesticides, most are using them once or twice a year. The primary use of these chemicals was to prevent or kill weeds, followed by killing or preventing insects. Most respondents said they applied the chemicals themselves and most found them to be very effective. Almost half of the chemical users said they would be very likely to use non-chemical pesticides if they had more access to them.

## Non- Pesticide Users

Respondents who had said they had not used pesticides at all in the past year were asked why they had not used these products, Table 6. Multiple responses were once again possible.

**Table 6: Why pesticides were not used**

	# of responses	%
Ineffective	21	3.1
Too costly	45	6.7
Unnecessary	139	20.7
Health	196	29.2
Environmental	270	40.2
Total	671	100

Three hundred and forty-six respondents said they had not used pesticides in the previous year (64% in question 1). This group of non-users generated six hundred and seven-one responses to answer why they did not use them. The effect on the environment was the most common reason for not using pesticides followed by health and the idea that pesticides were not necessary. A very small group did not use them because they were ineffective or too costly.

## All respondents

All respondents were asked whether they had used any non-chemical alternatives to control pests and disease or to enhance their lawn and garden, Table 7.

**Table 7: Non chemical use**

	%
Yes	61.2
No	38.8

Totals may not add to 100 due to rounding

The majority of respondents report having used non-chemical alternatives. Less than forty percent of respondents have not used non-chemical alternatives.

Respondents were then asked to indicate what their sources of information for lawn and garden care were, Table 8. Multiple responses were possible.

**Table 8: Sources of information for lawn and garden care**

	# of responses	%
Professionals at nurseries or garden centres	267	20.2
Gardening books	284	21.5
Newspapers, TV, radio	230	17.4
Internet sites	152	11.5
Hardware store	89	6.7
Family, friends or neighbours	298	22.6
Total	1320	100

A total of one thousand three hundred and twenty responses were given by the respondents. For this question the answers were widely distributed among all the possible sources. The most common source of information for lawn and garden care was 'family, friends or neighbours', followed by 'gardening books', 'professionals at nurseries' and 'newspapers, TV, radio'. Hardware stores and the internet were the least used sources of information.

Respondents were then asked how harmful they thought lawn and garden chemicals were to their family's health and the environment, Table 9 and 10.

**Table 9: How harmful are lawn and garden chemical to your family**

	%
Very harmful	51.8
Somewhat harmful	30.6
Not at all harmful	17.6

Totals may not add to 100 due to rounding

**Table 10: How harmful are lawn and garden chemicals to the environment**

	%
Very harmful	57.1
Somewhat harmful	30.2
Not at all harmful	12.7

Totals may not add to 100 due to rounding

The majority of respondents said lawn and garden chemicals were 'very harmful' to their families and to the environment. Seventeen percent of respondents thought these chemicals were 'not at all harmful' to their family and thirteen percent of respondents thought these chemicals were 'not at all harmful' to the environment.

Respondents were then asked how supportive they would be of a by-law that regulated lawn and garden chemicals, Table 11.

**Table 11: By-law support**

	%
Very supportive	57.4
Somewhat supportive	20.1
Not at all supportive	22.5

Totals may not add to 100 due to rounding

The majority of respondents said they would be 'very supportive' of this type of by-law. Less than one-quarter of respondents said they were 'not at all supportive' of a by-law.

In general, most respondents, both pesticide and non-pesticide users, had used non chemical alternatives to chemical pesticides. The most common source for information on lawn and garden chemical use was family, friends and neighbours followed by gardening books and professionals at garden centres. The majority of respondents said that pesticides were very harmful to their families. An even

larger majority of respondents said these chemicals were harmful to the environment. The majority of all respondents were very supportive of some type of by-law to regulate pesticide use.

## Demographics

Respondents were then asked to give some general demographic information about themselves and their household. The demographic information was then compared to the 2006 Census data<sup>1</sup> where possible.

### Gender

	%
Male	44.5
Female	55.5

The sample is slightly higher in the proportion of females than the population. The population of Mississippi Mills is 50.3% female and 49.7% males and the sample proportion is 56% female and 44% male.

### Education

	%
Less than high school	3.1
High school	16.5
College or trade school	37.5
University degree	42.8

The sample over-represents those with university degrees and under-represents those with less than a high school education. According to the Census data, eighteen percent of the Mississippi Mills population has less than a high school education and twenty percent of the population has a university degree. In the sample only three percent of the respondents had less than a high school education and forty-three percent of the respondents had a university degree.

### Income

	%
Under \$24,999	7.4
\$25-\$49,999	21.9
\$50-\$74,999	28.2
\$75-\$99,999	20.8
Over \$100,000	21.7

The 2006 census data indicates the median income of the population of Mississippi Mills is \$60,499. The median income in the sample is the \$50-\$74,999 category which includes the population value.

---

<sup>1</sup> Statistics Canada. 2007. *Mississippi Mills, Ontario (table). 2006 Community Profiles*. 2006 Census. Statistics Canada Catalogue no. 92-591-XWE. Ottawa. Released March 13, 2007.

### Age

	%
18-24	.2
25-34	4.3
35-44	15.0
45-54	19.6
55-64	30.7
65+	30.3

The sample over-represents older people. The proportion of people over the age of 65 in the population of Mississippi Mills is 14.7% according to the 2006 census and in the sample this group represents 30% of respondents. The sample also under represents younger people. The proportion of residents between the ages of 18-24 in the population of Mississippi Mills is 7% and less than one percent of the sample. The first two categories of age, 18-24 and 25-34 will be collapsed in further analysis because cell sizes are so low. The sample better represents the middle age categories of Mississippi Mills. According to the 2006 Census data, 35-44 year olds and 45-54 year olds make up 15% and 17%, respectively, of the population.

### Rent or Own

	%
Rent	4.8
Own	95.2

The sample over-represents home owners. The census data indicates that eighty-three percent of residents are home owners and the sample is comprised of ninety-five percent homeowners.

### Property description

	%
In town with a big yard	31.0
In town with a small yard	18.1
Rural area with big yard	47.1
Rural area with small yard	3.0
No yard	.8

The most common property type identified by residents was 'rural with a big yard', followed by 'in town with a big yard'. Less than 1% of respondents had 'no yard'. This data is not collected by Statistics Canada.

Generally, the demographics of the sample represent a group one would expect to respond to a survey of this type. While gender and income are quite close to the population statistics, age and education are skewed towards older more educated individuals with large yards. This reflects both the nature of the survey – lawn and garden maintenance – and the realities of survey research. Respondents who own property are more likely to be older and more educated and therefore more interested in a survey that targets an activity they are involved in. Survey respondents who are older are usually over-represented in

all surveys because they have more time to complete surveys. The mode itself – paper and pencil – might also appeal more to an older demographic group than other modes. Younger people might be more likely to fill in surveys that are on-line.

## Bi-Variate Results and Analysis

To understand the data more fully, it is helpful to break it down into different sub-groups to see if there were differences on the behavioural, attitudinal or demographic dimensions. Cross-tabulations of potential differences were produced for all available analytical variables. In this report, only differences in responses which were statistically significant (at the .05 level) will be mentioned.

### Pesticide use

There were a number of differences in attitudes and behaviours between those who reported using pesticides at all in the previous year (Q1) and those who had not.

Non-pesticide users were more likely than pesticide users to have used non-chemical alternatives to control pests and disease to enhance their garden or lawn, Table 12. However, it is important to note that the majority of pesticide users, 56%, had also tried non-chemical alternatives.

**Table 12: Use of non-chemical alternatives by pesticide use**

	Pesticide user	Non-pesticide user
Used non-chemical alternatives	56%	64%
Did not use on-chemical alternatives	44%	36%

Cramers V = .085 Significant at the .05 level

There was also difference in how harmful pesticide users and non-users thought garden chemicals were to their families and to the environment, Table 13 and 14.

**Table 13: Harm to the family by Pesticide use**

	Pesticide user	Non-pesticide user
Very harmful	17%	71%
Somewhat harmful	43%	24%
Not at all harmful	10%	5%

Cramers V = .566 Significant at the .05 level

**Table 14: Harm to the environment by Pesticide use**

	Pesticide user	Non-pesticide user
Very harmful	23%	76%
Somewhat harmful	49%	20%
Not at all harmful	29%	4%

Cramers V = .539 Significant at the .05 level

Non-pesticide users were much more likely to say that lawn and garden chemicals were ‘very harmful’ to the health of their family and to the environment. Pesticide users were more likely to say that pesticide use was ‘somewhat’ or ‘not at all harmful’ to their family and to the environment. Almost thirty percent of pesticide users thought pesticides were ‘not at all harmful’ to the environment.

There was also difference between the two groups when looking at support for some type of by-law regulating pesticide use, Table 15.

**Table 15: Support of a by-law by Pesticide use**

	Pesticide user	Non-pesticide user
Very supportive	24%	76%
Somewhat supportive	31%	14%
Not at all supportive	45%	10%

Cramers V= .519 Significant at the .05 level

The majority of non-pesticide users were very supportive of a by-law regulating pesticide use. The largest single group of pesticide users were ‘not at all supportive’ of a bylaw regulating pesticide use, although when adding together those who were ‘very supportive’ and ‘somewhat supportive’ of a by-law, this aggregated group is larger than those pesticide users who were ‘not at all supportive’ of a by-law.

Because the “sources of information” question was aggregated (responses for all categories were possible and were added together in the post analysis), determining statistical difference between pesticide users and non-users in the bivariate analysis is not possible. However, by examining the percentage differences between pesticide users and non-users some differences can be described, Table 16.

**Table 16: Sources of pesticide information by Pesticide use**

	Pesticide user	Non-pesticide user
Professionals at nurseries or garden centres	62%	48%
Gardening books	48%	61%
Newspapers, TV, radio	40%	49%
Internet sites	26%	33%
Hardware store	29%	12%
Family, friends and neighbours	54%	63%

Pesticide users were more likely than non-users to get information from professionals at nurseries and garden centres and hardware stores. Non-pesticide users were more likely than pesticide users to get their information about pesticides from gardening books, family, friends and neighbours, newspapers, TV, and radio, and the internet.

There were a number of statistically significant differences when looking at some of the demographic variables and pesticide use, Tables 17,18 and 19. Once again, only tables where there is such a difference will be mentioned.

**Table 17: Gender by Pesticide use**

	User	Non-user
Male	57%	37%
Female	43%	63%

Cramers V = .200 Significant at the .05 level

Non pesticide users were more likely to be female than male. Fifty-seven percent of pesticide users were male compared to 43% of females. Sixty-three percent of non-users were female compared to 37% of males.

**Table 18: Income by Pesticide use**

	User	Non-user
Under \$24,999	1%	10%
\$25 - \$49,999	19%	23%
\$50 - \$74,999	36%	24%
\$75- \$99,999	18%	22%
Over \$100,000	25%	20%

Cramers V = .203 Significant at the .05 level

Pesticide users were more likely than non-users to be in the middle to higher income brackets. Non-users were more likely to be evenly distributed amongst income brackets.

**Table 19: Age by Pesticide use**

	User	Non-user
18-34	6%	4%
35-44	12%	17%
45-54	13%	23%
55-64	38%	27%
Over 65	32%	30%

Cramers V = .172 Significant at the .05 level

Older people were more likely to be pesticide users than younger people. Seventy percent of pesticide users were over the age of 55 while fifty-seven percent of non-users were over the age of 55.

Generally, pesticide users were less likely than non-users to think pesticides were harmful to their families and to the environment. This group was more likely to get information about pesticide use from professionals at garden centres than non-pesticide users. Pesticide users were less likely to be supportive of a by-law limiting pesticide use than non-pesticide users, although over half of pesticide users were either somewhat or very supportive of a by-law. Pesticide users were more likely to be older males with higher incomes.

## Gender

There were also a number of significant differences between males and females and their attitudes and behaviours towards pesticide use.

There were differences between male and female pesticide users when considering who had applied the lawn and garden chemicals, Table 20.

**Table 20: Application of chemicals by Gender**

	Males	Females
Lawn care company	13%	13%
Yourself	86%	63%
Another person	0%	19%
Other	1%	5%

Cramers V = .374 Significant at the .05 level

Males were much more likely than females to apply lawn and garden chemicals themselves. Females were more likely than males to have another person apply the chemicals, though the majority of females applied them themselves.

There were differences between males and females in how effective they thought the lawn and garden chemicals were, Table 21.

**Table 21: Effectiveness of chemicals by Gender**

	Males	Females
Very effective	71%	45%
Somewhat effective	29%	45%
Not very effective	0%	8%
Not at all effective	0%	1%

Cramers V = .128 Significant at the .05 level

Male pesticide users were much more likely than females to say that pesticides were effective. Seventy-one percent of males thought the chemicals were 'very effective' compared to forty-five percent of females. No males thought the chemicals were 'not very' or 'not at all effective'.

Males also thought differently when asked how likely they would be to try non-chemical pesticides, Table 22.

**Table 22: Non-chemical pesticide use by Gender**

	Males	Females
Very likely	38%	62%
Somewhat likely	31%	28%
Not very likely	18%	4%
Not at all likely	9%	0%
Already use them	4%	5%

Cramers V = .334 Significant at the .05 level

Sixty-two percent of females said they would be 'very likely' to use non-chemical pesticides compared to thirty-eight percent of males. Twenty-seven percent of male pesticide users said they were 'not very' or 'not at all likely' to use non-chemical pesticides compared to four percent of females.

Female pesticide and non-pesticide users were also more likely to say they had used alternative non-chemical pesticides, Table 23.

**Table 23: Use of alternative pesticides by Gender**

	Males	Females
Yes	53%	70%
No	47%	30%

Cramers V = .173 Significant at the .05 level

Seventy percent of females and fifty-three percent of males said they had tried non-chemical alternatives to chemical pesticides, Table 23.

There were significant differences between males and females in how harmful they thought pesticides were to their families and the environment, Table 24 and 25.

**Table 24: Pesticides harmful to the family by Gender**

	Males	Females
Very harmful	32%	69%
Somewhat harmful	39%	25%
Not at all harmful	29%	6%

Cramers V = .395 Significant at the .05 level

**Table 25: Pesticides harmful to the environment by Gender**

	Males	Females
Very harmful	38%	73%
Somewhat harmful	40%	24%
Not at all harmful	22%	3%

Cramers V = .381 Significant at the .05 level

Females were much more likely than males to say that lawn and garden chemicals were 'very harmful' to the health of their families. An even larger proportion of females to males said that pesticides were 'very harmful' to the environment.

Finally, females were much more likely than males to say they were supportive of a bylaw regulating the use of lawn and garden chemicals, Table 26.

**Table 26: Pesticides harmful to the family by Gender**

	Males	Females
Very supportive	45%	69%
Somewhat supportive	23%	19%
Not at all supportive	33%	12%

Cramers V = .275 Significant at the .05 level

Generally, females were much more sensitive than males to the impact of lawn and garden chemicals on their families and the environment. They were more likely to use alternatives and were more supportive of a bylaw limiting pesticide use. Males were more likely than females to apply the chemicals and were more likely to think they were effective.

## Age

There were some differences in attitudes and behaviours regarding pesticide use in people of different age groups.

There were correlations between age and use of non-chemical alternatives to control pests and disease on lawns or gardens, Table 26.

**Table 26: Use of alternatives by age group**

	18-34	35-44	45-54	55-64	65+
Yes	39%	60%	63%	71%	54%
No	61%	40%	37%	29%	46%

Cramers V = .168 Significant at the .05 level

Older respondents were more likely than younger respondents to say they had tried non-chemical alternatives to chemical pesticides, particularly in the 35-64 year age groups. Respondents in the youngest age category were least likely to have tried alternatives.

There were significant correlations between saying pesticides were harmful to the family and the environment and the different age groups, Tables 27 and 28.

**Table 27: Pesticides harmful to family by age group**

	18-34	35-44	45-54	55-64	65+
Very harmful	52%	65%	65%	46%	45%
Somewhat harmful	30%	30%	21%	36%	33%
Not at all harmful	17%	5%	14%	19%	23%

Cramers V = .151 Significant at the .05 level

**Table 28: Pesticides harmful to environment by age group**

	18-34	35-44	45-54	55-64	65+
Very harmful	61%	68%	69%	52%	50%
Somewhat harmful	30%	30%	21%	35%	33%
Not at all harmful	9%	1%	10%	14%	17%

Cramers V = .147 Significant at the .05 level

The largest proportion of respondents in all age groups thought that pesticides were 'very harmful' to their families and to the environment, as was seen in the overall results. The middle age groups of 35-44 and 45-54 year old groups were more likely to express this sentiment than the younger or older groups.

The same strong sentiments regarding support for a bylaw regulating pesticide use can also be seen in the 35-44 and 45-54 year old groups, Table 29.

**Table 29: Support for a bylaw by age group**

	18-34	35-44	45-54	55-64	65+
Very supportive	70%	71%	70%	52%	50%
Somewhat supportive	17%	18%	15%	23%	22%
Not at all supportive	13%	10%	15%	25%	28%

Cramers V = .148 Significant at the .05 level

## Summary and Conclusions

In summary, the majority of respondents to the survey were not using pesticides. Those that were using pesticides were, for the most part, using them moderately to kill or prevent insects and weeds once or twice a year. The most common source of information about pesticide use for pesticide users were professionals at garden centres. Pesticide users felt that the pesticides were effective but were open to using non-chemical alternatives or have already tried them. The majority of pesticide users felt that pesticides were at least 'somewhat' harmful to their families and to the environment. Pesticide users were also open to the idea of some type of bylaw which would regulate pesticide use.

Non-pesticide users held stronger sentiments regarding the effects of pesticides on their families and the environment. The most common reason non-pesticide users gave for not using pesticides was the environment. Non-pesticide users were more likely to get their information about pesticides from family, and friends or gardening books than garden centres.

Pesticide users were more likely to be older males. Females were much more likely to be non-pesticide users and were much more sensitive to the effects of pesticides on the environment and their families. Females were also less likely to say that pesticides were effective than males. Respondents between the ages of 35 to 54 were most likely to think pesticides were very harmful to the environment and their family.

From these facts a number of conclusions can be drawn. In general, the residents of Mississippi Mills are not heavy pesticide users. As a whole, they are aware of the negative effects pesticides are having on health and the environment and are open to the idea of using non-chemical alternatives to chemical pesticides in the maintenance of their lawns and gardens. In general, they are also open to the idea of a bylaw which would regulate their use. Some groups in the population appear to be more open to the concept of regulating pesticide use than others and should be considered in the education communication and implementation of any regulation of pesticides. Specifically, females are more sensitive to the use and effects of pesticides. It is important to note that females in surveys are often more concerned with social policy, a finding generally attributed to their primary responsibility for children. This could include the environment. Older males are the primary users of pesticides and are also less supportive of a bylaw and less likely to think these chemicals are harmful to health and the environment. These groups should be targeted for education on pesticide use and its detrimental effects. Since garden centres are the most common source of information for pesticide users, they should also be targeted as the best outlet for education on the issue.

## Appendix I - Questionnaire

**Q1.** On average, how often would you say you have used chemicals on your lawn or garden in the past year – that is chemical pesticides, herbicides or fungicides.

*Please check one box only.*

- Monthly
- 3-4 times a year
- 1-2 times a year
- Not at all

*If you answered not at all skip to Q6*

**Q2.** What were the purposes of using chemical lawn or garden products?

*Check all that apply*

- Preventing weeds
- Preventing insects
- Preventing mould or fungus
- Killing existing weeds
- Killing existing insects
- Killing mould or fungus

**Q3.** Who applied these chemicals?

*Please check one box only.*

- A lawn care company
- Yourself
- Another person

**Q4.** How effective would you say these products were?

*Please check one box only.*

- Very effective
- Somewhat effective
- Not very effective
- Not at all effective

**Q5.** If non-chemical forms of pest and disease control and fertilizers were more accessible how likely do you think you would be to use them?

*Please check one box only then go to Q7.*

- Very likely
- Somewhat likely
- Not very likely
- Not at all likely
- Already use them

*Non-users only answer Q6*

**Q6.** Why have you not used chemical products on your lawn and garden?

*Please check all that apply.*

- Ineffective
- Too Costly
- Unnecessary
- Health reasons
- Environmental reasons
- Other

**Q7.** Have you ever used non-chemical alternatives to control pests and disease and/or to enhance your garden and lawn?

*Please check one box only.*

- Yes
- No

**Q8.** What are your sources of information for lawn and garden care?

*Please check all that apply.*

- Professionals at nurseries or garden centres
- Gardening books
- Newspapers, TV, radio
- Internet sites
- Hardware store
- Family, friends or neighbours
- Other

**Q9.** How harmful do you think lawn and garden chemicals are for your family's health?

*Please check one box only.*

- Very harmful
- Somewhat harmful
- Not at all harmful

**Q10.** How harmful do you think lawn and garden chemicals are for the environment?

*Please check one box only.*

- Very harmful
- Somewhat harmful
- Not at all harmful

**Q11.** Other Ontario municipalities have adopted or are considering by-laws to regulate the use of lawn and garden pesticides. How supportive are you of this type of by-law for the Town of Mississippi Mills?

*Please check one box only*

- | Very supportive
- | Somewhat supportive
- | Not at all supportive

**Now just a few questions to help us analyze the data**

**Q12.** Are you:  
*Please check one box only.*

- | Male | Female

**Q13.** Please indicate education completed:  
*Please check one box only.*

- | Less than high school
- | High school
- | College or trade school
- | University degree

**Q14.** What is your total household income?  
*Please check one box only.*

- | Under \$24,999 | \$25 – \$49,999
- | \$50 - \$74,999 | \$75 – 99,999
- | Over \$100,000

**Q15.** Which age group do you fit in?

*Please check one box only.*

- | 18-24 | 25-34
- | 35-44 | 45-54
- | 55-64 | 65+

**Q16.** Please specify the number of residents of each age group in your household.

- \_\_\_ 0-4                    \_\_\_ 5-14
- \_\_\_ 15-19                \_\_\_ 20+

**Q17.** Do you rent or own your property?  
*Please check one box only.*

- | Rent
- | Own

**Q18.** How would you best describe the property that you are living in?

*Please check one box only.*

- | In town with big yard
- | In town with small yard
- | Rural area with big yard
- | Rural area with small yard
- | No yard

**Thank you for taking the time to fill out the survey. Please remember to drop it off at one of the specified locations by Friday, August 31. Any questions, please call Karl Grenke at the Town of Mississippi Mills at 256-2064, ext. 209**

