National Survey of
farmers and ranchers

ECOLOGICAL GOODS AND SERVICES

Prepared for:
Wildlife Habitat Canada

Wildlife Habitat Canada

Prepared by:
Environics Research Group

ENVIRONICS
RESEARCH GROUP

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Environics Research Group Limited
33 Bloor Street East, Suite 900
Toronto, Ontario
Canada M4W 3H1
tel: 416.920.9010
fax: 416.920.3299
http://www.environics.net

Agriculture and Agri-Food Canada (AAFC) is pleased to participate in the production of this publication. AAFC is committed to working with our industry partners to increase public awareness of the importance of the agriculture and agri-food industry to Canada. Opinions expressed in this document are those of Environics Research Group and Wildlife Habitat Canada and not necessarily AAFC's.

Agriculture and
Agri-Food Canada

Canada

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Introduction

Environics Research Group is pleased to present the following report on a survey of Canadian farmers and ranchers, carried out on behalf of Wildlife Habitat Canada (WHC), to look at issues surrounding the stewardship of Canadian agricultural lands in general and of ecological goods and services in particular. Fieldwork took place between February 27 and March 27, and between April 17 and 23, 2006.

To qualify for the sample of 1,794 rural landowners, respondents had to manage a minimum of ten acres of land outside a village, town or other urban centre, be one of the people in the household primarily responsible for making long-term decisions affecting the land, and meet Statistics Canada's definition of a farmer (that is, to report earning at least $2,500 per annum from their land). For the purposes of this report, any references to "farmers" should be looked at in terms of this definition. The reader should also be aware that the term "farmers" refers to both "farmers" and "ranchers." The term "farmers" is used in a generic sense to refer to respondents across the country.[1]

This Environics study is the fourth in a series, conducted on behalf of WHC and partners, among Canadian rural landowners, and the second to be confined to farmers. It updates and builds upon a benchmark national survey of farmers on the topic of land use and land stewardship, undertaken in 2000, and upon a survey of rural landowners (farmers and non-farmers) conducted in 2003. These two surveys have been referred to in previous reports as the Phase I and Phase III surveys. (The Phase II survey, completed in 2001, was conducted among rural landowners who owned 25 acres or fewer in Southern Ontario and 50 acres or fewer in Northern Ontario.) Copies of the three previous rural landowner surveys may be found on Wildlife Habitat Canada's website at http://www.whc.org/NationalLandownerSurveys.htm.

Like the original benchmark survey, this is one of the most comprehensive surveys of its kind ever undertaken in Canada. The primary purpose of this study – as for the previous studies – was to provide policy-makers and program developers with current data to assist them in the development of stewardship policies and programs. The current survey was also designed to focus primarily on issues related to ecological goods and services, within the context of land stewardship and the economic realities of modern agricultural operations.

The reader should note that the tracking data discussed in this report is confined to observations between the results of the current survey with those of the Phase I survey and of the Phase III survey, both of which were national surveys. It should be further noted that any the tracking observations are made solely among farmers. Current results are not compared to those of non-farming rural landowners included in the Phase III survey. It is always very important, when making tracking observations, that the samples and methodologies being compared are as closely matched as possible.

Regional and demographic differences will be highlighted where they were found to be significant and where they advance our understanding of the survey results. All of the regional and demographic results can be found in the Statistical Tables, which are produced under separate cover from this report.

Some of the topics covered in the Phase I and/or Phase III surveys and tracked, either directly or indirectly, in the current survey include:

- farmers' top-of-mind concerns about their agricultural operations; and
- the degree to which farmers are practicing one of the tenets of land stewardship, namely, allowing the impact of their land use practices on their neighbours' lands to influence their land use decisions.

1 For further details on the methodology used, please refer to the Methodology in the attached Appendix.

Some of the new topics covered in the current survey are:

- the level of optimism regarding the income opportunities afforded by present and future agricultural operations;
- openness to using new agricultural products and techniques;
- reported use of specific land management practices and the perceived economic benefits or costs of these practices;
- perceptions regarding the ripple-out effects of environmentally-sound land management practices;
- interest in learning more about environmentally-sound practices and, beyond that, the willingness to invest in environmentally-sound practices;
- awareness of and reported participation in environmental programs;
- awareness of the term "ecological goods and services;"
- farmers' sense of their personal responsibility to use environmentally-sound practices; and
- motivations and barriers to participation in environmental programs.

Executive Summary

Introduction

Environics Research Group is pleased to present the following report on a survey of Canadian farmers and ranchers, carried out on behalf of Wildlife Habitat Canada (WHC) to look at issues surrounding the stewardship of Canadian agricultural lands in general and of ecological goods and services in particular. Fieldwork took place between February 27 and March 27, and between April 17 and 23, 2006.

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Profiles of respondents

The sample for the current survey consists of 1,794 rural landowners across Canada who report owning ten acres or more of rural land and earning at least $2,500 per annum from their land. Almost all, 96 percent, report owning the land they manage, and, in what is still a male-dominated profession, three-quarters are men.

The vast majority of the sample, 83 percent, report farming as their primary occupation and a majority of 60 percent report that most or all of their household income is derived from the land or farm that they own; both these proportions are considerably higher than was the case for the 2000 and 2003 surveys. Income levels are fairly well distributed across the spectrum and over half report having at least some post-secondary education. The results of the current survey indicate that access to the Internet is growing among Canadian farmers; it now stands at 69 percent of all farmers.

From five to six in ten farmers report having pasture land, crop land and/or forested land. Four in ten report having wetlands and two in ten report having idle or open land. The demographic profile of the current sample also indicates a shift toward larger acreages: the average acreage of land owned has increased steadily since the 2000 survey. The survey also finds increases in the reported acreages of crop and forested land, but a decrease in the reported acreages of pasture land.

As was the case with the earlier surveys, farmers express a high level of interest in the issues being raised in the survey through their relatively high rate of compliance, which stands at 91 percent. In other words, almost everyone who qualified for the survey completed the entire interview, which lasted from 20 minutes to half an hour and which required them to report, in some detail, on their agricultural practices, and to articulate their opinions on a wide range of questions.

Summary of findings

The economic context

Despite the fact that many Canadian farmers see themselves as "part of the solution," the survey results make it clear that economic concerns dominate the context in which they will make crucial decisions regarding environmentally-sound practices. When Canadian farmers are asked, top-of-mind, to name the issues that most concern them regarding their *agricultural operation*, the proportions who say, simply, that they are concerned about being able to make a living, or who mention issues related to prices and/or costs are several times that who mention environmental issues.

Farmers' over-riding concern with economic issues is also reflected in their responses when they are asked to compare the opportunities for income on their farming or ranching operation over the past couple of years: the vast majority say these have worsened. They are not quite as pessimistic when asked to look into the future: they are as likely to predict no change as further deterioration, but relatively few predict a turnaround toward improved prospects. Interestingly, actual farming income was not a major factor in farmers' assessments of income opportunities.

When Canadian farmers are asked about their attitudes toward new products and techniques, the survey finds they are fairly evenly spaced along the adoption spectrum, from those who are early adopters to those who wait for a period in which the product can be "tested" by others, to those who basically ignore innovation. Younger farmers are less likely to say they always stay with the same products and techniques, but there is no dramatic skew toward them being early adopters. The survey does find some correlation between education and innovation; farmers with a post-secondary education are more likely than average to be early adopters of news products and techniques.

Land use practices

The survey results suggest the need for public education efforts to better inform farmers about a range of environmentally-sound land use practices. Of the 13 practices included in the survey, three are being undertaken (or have been undertaken) by a majority of the farmers for whom they would be recommended. However, failure to undertake these practices appears to be related more to the perception that the practice would not be applicable to their agricultural operations than to a resistance to undertaking the practice.

Among all Canadian farmers, between four and five in ten report that they are currently, or have in the past, contributed to the restoration or conservation of natural areas, and/or planted trees to create shelterbelts; about one-third report undertaking buffer-stripping or riparian zone management. Among farmers whose agricultural operations concentrate on field crops, dairy and poultry, a majority report doing nutrient management plans, but well under half report using manure storage to prevent run-off, rotational grazing, using subsurface manure application, and/or changing the feed they use in order to reduce the level of phosphorous or nitrogen in manure. Among farmers whose agricultural operations concentrate on cattle, pigs, other livestock or horticulture, substantial majorities report using crop rotations to reduce nutrient application and/or improve soil quality, no till or reduced tillage and/or nutrient management plans; about half report doing permanent cover of marginal crop land, four in ten report using integrated pest management, and two in ten report having postponed a harvest in the interest of wildlife habitat.

Among all farmers who reported undertaking one or more of the specific land use practices, approximately half feel they got the economic benefits they were expecting as a result of adopting these environmentally-sound land use practices. Another quarter perceived no economic payoffs. Very few report better than expected – or worse than expected – economic consequences from undertaking these practices. Just one in ten reported that, instead of achieving economic benefits, they had incurred costs. These findings suggest that promotion of these practices could emphasize the potential for economic benefits and the low risk of incurring costs, a strategy that should work well in light of farmers' preoccupation with the economic challenges of operating in the world of Canadian agriculture.

On a less positive note, there has been a slow but steady decline since 2000 in the reported practice of land use decisions being influenced by the impact on surrounding lands. Today, fewer than half of Canadian farmers say the possible impact on their neighbours' lands is not a factor in their land management decisions.

The ecological context

Generally speaking, the survey finds no clear consensus on the question of whether it is the farmer or the general public who benefits the most when farmers adopt environmentally-sound agricultural practices. However, by adding together the proportion who say the general public benefits the most and the proportion who say it is the farmer's neighbours, one can conclude that a clear plurality do see the ripple-out benefits of farmers' undertaking these kinds of practices.

Canadian farmers express high levels of interest, not only in learning more about environmentally-sound land use practices, but also in actually adopting some of these practices (even when they are reminded that this might mean investments of time or money on their part). However, an analysis of the areas of most interest – improving water quality, soil enhancement and promoting rural values – suggests that farmers would be most open to promotions that focus on benefits that apply more directly to them.

Although there is clearly a need to increase public education efforts to promote environmental programs, the survey results indicate this would pay off in terms of increased participation. More than five in ten farmers express awareness of environmental programs for which they might be eligible, but reported participation rates stand at two-thirds of those who are aware of the programs (and about one-third of all Canadian farmers). Involvement in these programs is primarily motivated by reasons related to environmental and conservation concerns, but three in ten participants mention financial and productivity considerations. Failure to participate is almost equally attributed to financial considerations and lack of time.

Ecological goods and services

Unaided name recognition awareness of the term "ecological goods and services" is fairly low – it stands at 25 percent of Canadian farmers – but another 22 percent report at least some familiarity with the term when they are given a definition. Aided awareness among the subsequent 47 percent of all Canadian farmers is a substantial base on which to build public communications and make the concept actionable among those who own and control Canada's rural land.

When Canadian farmers are asked to name the main factors that get in the way of rural landowners like themselves undertaking management and land use practices that, directly or indirectly, provide benefits to the general public, the largest proportion, by far, name a financial consideration. No other considerations even come close in terms of imposing mental barriers to the promotion of environmentally-sound practices. Virtually no farmers specifically say there are no barriers, but a significant minority of two in ten farmers offer no response to the question, a finding that suggests they have not articulated, in their own minds, barriers to integrating the concept of ecological goods and services into their land management practices (and therefore may be less resistant to the idea of doing so).

The finding that 70 percent of Canadian farmers believe that their current management and land use activities provide broader benefits to the general public confirms the conclusion that farmers already see themselves as "part of the solution" when it comes to dealing with the environmental challenges facing Canada today. Furthermore, the survey finds an almost unanimous consensus among farmers that they, personally, have a responsibility to the environment. In fact, almost half believe they have a great deal of responsibility.

When farmers who say their own practices benefit the environment are asked for specifics, the largest proportion mention the improvement of water quality. Farmers also believe their practices benefit the environment in the areas of conserving wildlife habitat, improving air quality, prevention of erosion, the provision of healthier food, and the use of fewer chemicals.

When farmers are asked if a number of specific factors would convince them to adopt environmentally-sound land management practices, financial incentives outweigh other potential approaches. Approximately three-quarters, each, respond positively to financial incentives (such as direct payments from a government or other program, or tax credits), to higher prices for agricultural commodities produced with sound environmental management practices, and to the suggestion that they would change their practices if their farm or ranch incomes were higher than they are now.

Farmers would also respond positively to appeals to their general sense of pride in being a steward of their land, if they were given access to new or improved technologies, to technical assistance and extension services, or to information on the impacts of farming or ranching practices on the environment.

Conclusions

The results of the current survey confirm Canadian farmers' continuing interest in, and sensitivity to, the basic tenets of land stewardship. At the same time, however, it is clear that many are – and perceive themselves to be – struggling to survive financially in a very challenging sector of the economy. Promotional efforts that emphasize the economic benefits of using environmentally-sound land practices (such as more productive crops or lower operating costs) will be more successful than broader or more altruistic appeals (such as the reduction of greenhouse gases).

Since the survey finds a trend toward larger land holdings (but less idle land), this type of demographic shift should be factored into promotional efforts. Another such shift to be taken into account is that toward greater access to the Internet.

Although farmers are not, on the whole, cutting-edge, early adopters of new products and techniques, only about one-quarter appear to be seriously resistant to change and almost a half are toward the early adoption end of the spectrum. This finding, combined with farmers' tendency to see themselves as "part of the solution," suggests there is an openness in the agricultural community toward the promotion of environmentally-sound practices and ecological goods and services.

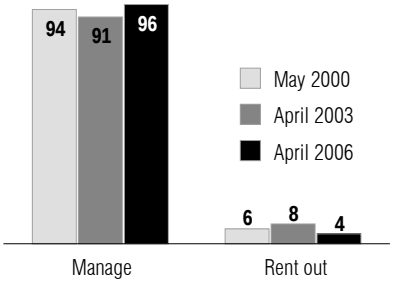
The survey points the way toward a number of farmer education efforts, including:

- educating farmers about specific environmentally-sound practices and how these can be applied to their agricultural operations;
- the economic benefits of specific environmentally-sound practices;
- the importance of taking into account the impact of land use practices on neighbouring lands and, more broadly, the impact on the watershed;
- the ripple-out effects of environmentally-sound practices (to neighbours and the general public);
- the existence of environmental programs offered in both the public and private sectors; and
- the meaning and implications of the term "ecological goods and services."

Personal profiles

The sample for the current survey consists of 1,794 rural landowners across Canada who report *owning or renting* ten acres or more of rural land and earning at least $2,500 per annum from their land. This classified them as farmers because they met Statistic Canada's definition of a farmer being someone who earns at least $2,500 per annum from the land. Almost all, 96 percent, report owning the land they manage; four percent report they are renting the land over which they make the long-term management decisions. (See Figure 1.) The fact that farming is still a male-dominated profession is reflected in the sample, three-quarters of whom are men.

FIGURE 1
Responsible for land management
Farmers 2000 - 2006



Q.4Sa
Are you one of the people responsible for making the long-term management decisions regarding this land?

The vast majority of the sample, 83 percent, report farming as their primary occupation. This is 26 points higher than that reported in 2003 and 12 points higher than that reported in the 2000 survey of farmers. A total of just over one in ten report their primary occupation is something other than farming. Two percent say they are retired and one percent list themselves as homemakers. (See Figure 2.)

FIGURE 2
Primary occupation of respondents
Farmers 2000 - 2006

Q.D12
What is your primary occupation …?

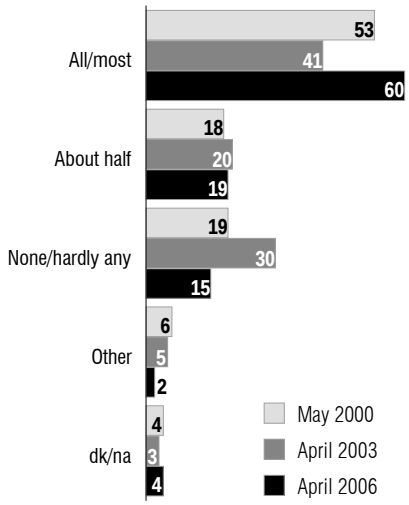
A majority of 60 percent report that most or all of their household income is derived from the land or farm; this proportion is 19 points higher than that reported in 2003. A total of 34 percent report that half or more of their household income comes from other sources, in other words, that they are in two-income households or they work at another job to supplement their farming income. (See Figure 3.)

As was the case in 2003, household income levels among farmers are fairly well distributed across the spectrum. A total of three in ten report annual incomes under $50,000, and another two in ten report incomes between $50,000 and $100,000. A total of three in ten report incomes of $100,000 or more. (See Figure 4.)

FIGURE 3

Proportion of income from land or farm

Farmers 2000 - 2006



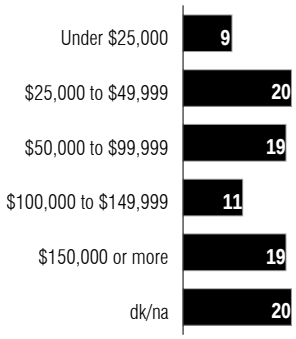
Q.D14b

Approximately, what proportion of your total household income is derived from the land or the farm that you own or manage …?

FIGURE 4

Income of respondents

Farmers April 2006



Q.D13a

For statistical purposes only, we need information about your household income. All individual responses will be kept confidential. What was your total gross household income before taxes for 2005 …?

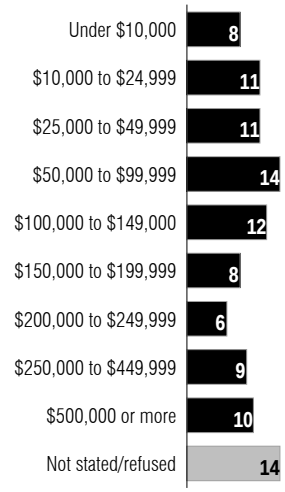
When farmers are asked about the gross total of their farm/ranch sales, three in ten report annual gross receipts under $50,000, more than one in ten report receipts between $50,000 and $100,000, and more than four in ten report incomes of $100,000 or more. (See Figure 5.) Interestingly, there is no clear correlation between reported farm income and the number of acres being mangaged.

More than five in ten farmers report having at least some post-secondary education; two in ten have attended university and three in ten report some other kind of post-secondary education, such as a community college or trade school. Two in ten report having less than a high school education. (See Figure 6.) Older farmers are less likely than average to post-secondary education; younger farmers are more likely to report having attended community college or a trade school.

FIGURE 5

Total farm/ranch sales received in 2005

Farmers April 2006



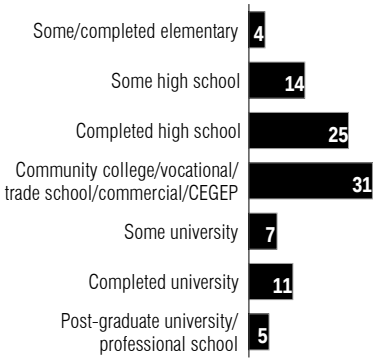
Q.D14a

Which category best describes the total farm/ranch sales you received in 2005, including government payments, but before deductions …?

FIGURE 6

Education level of respondents

Farmers April 2006



Q.D11

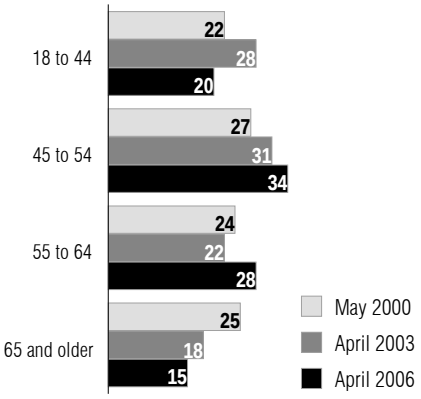
What is the highest level of education that you have reached?

The current sample of farmers is similar in age to that reported in 2003: in both cases, there is a skew toward middle-aged respondents. In the current survey, two in ten report being 44 years of age or younger (but almost all of these are in the 35-44 year-old age bracket); just over three in ten are between the ages of 45-54; three in ten are between the ages of 55-64; and just under two in ten are 65 years of age or older. (See Figure 7.)

FIGURE 7

Age of respondents

Farmers 2000 - 2006



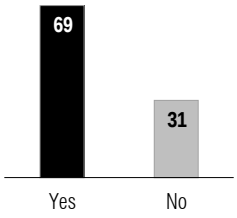
Q.D3
What year were you born?
Note: Converted to age

The results of the current survey indicate that access to the Internet is growing among Canadian farmers. Today, 69 percent report having easy access to the Internet. In 2003, 67 percent of farmers reported having easy access to a computer and 88 percent of that subsample (or 59% of all farmers) reported their home computer was linked to the Internet. (See Figure 8.)

FIGURE 8

Have regular, easy access to Internet

Farmers April 2006



Q.D10
Do you have regular or easy access to the Internet?

Land ownership profiles

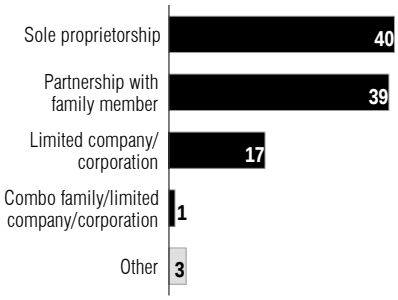
The survey results confirm that the sample is largely that of the traditional "family farm:" a total of 80 percent report that their farm operation is that of a sole proprietorship, a partnership with a family member, or a combination of a family partnership and a limited company or corporation. Seventeen percent describe their operation as a limited company or corporation. (See Figure 9.)

When farmers are asked about the commodities they produce, the largest proportion, 34 percent, report raising field crops; 22 percent report cattle farming. Another 11 percent report a combination of these two commodities. Twelve percent report dairy farming. Fewer than one in ten, each, describe their farm operations as concentrating on some other area of agricultural activity. (See Figure 10.)

FIGURE 9

Type of farm or ranch operation

Farmers April 2006



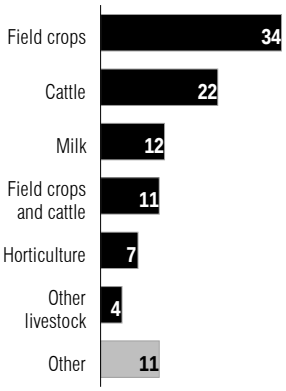
Q.D4b

Which one of the following best describes your farm or ranch operation …?

FIGURE 10

Farm operation

Farmers April 2006



Q.D2

Which one of the following kinds of production best describes your farm or ranch operation …?

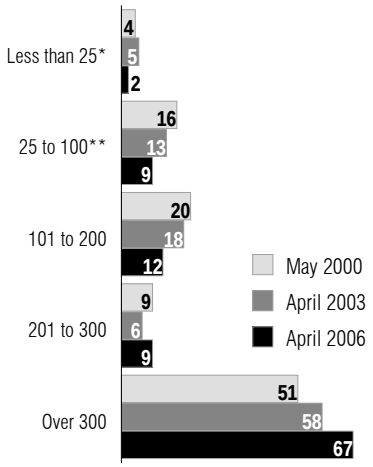
The average size of managed acreages continues to increase. Today, farmers report managing an average of 1,127 acres (up from 900 acres in 2003 and 761 acres in 2000). At the top end of the spectrum, 67 percent report that they manage more than 300 acres. At the other end of the spectrum, 11 percent say they manage 100 acres or less. (See Figure 11.)

Farmers in the Prairie provinces report managing larger than average acreages. Quebec farmers report the smallest average acreage. (See Figure 12.)

FIGURE 11

Total number of acres

Farmers 2000 - 2006

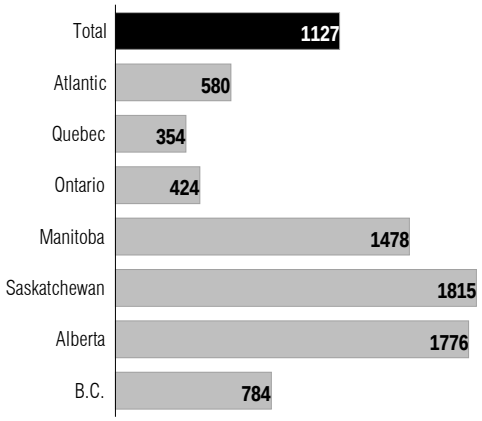


* Prior to 2006, 25 or less
** Prior to 2006, 26 to 100

FIGURE 12

Average number of acres managed

Farmers April 2006



Q.D4a
How many acres {or hectares} in total do you manage?

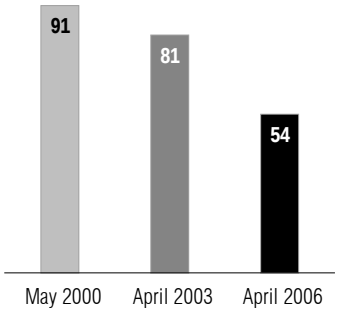
Land use profiles

There has been a sharp downward trend since 2000 in the proportion of the sample who report having land that is growing crops, but there has been a steady increase in the average number of crop acres. Once again, this reflects the trend toward larger acreages being controlled by fewer farmers or ranchers. Today, 54 percent report having crop land: this proportion is down 27 points from 2003 and a total of 37 points from 2000. The average number of acres in crops now stands at 776 acres (compared to 526 acres in 2003 and 395 acres in 2000). Quebec farmers are less likely than average to report having crop land, expecially compared to their neighbours in Ontario. The largest acreages are in the Prairie provinces. (See Figures13, 14 and 15.)

FIGURE 13

Any land growing field crops, Christmas trees or orchards

Farmers April 2006

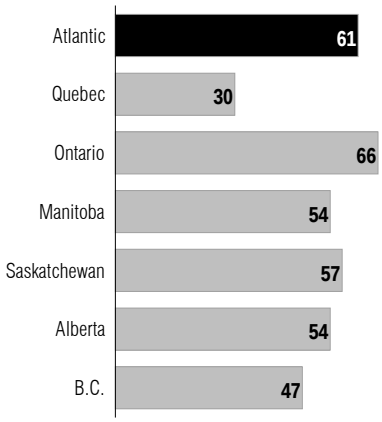


Q.D5a
Currently, is any of your land growing field crops, Christmas trees or orchards?
Note: Prior to 2006, question was: "Currently, is any of your land growing crops?"

FIGURE 14

Any land growing field crops, Christmas trees or orchards

Yes Farmers April 2006

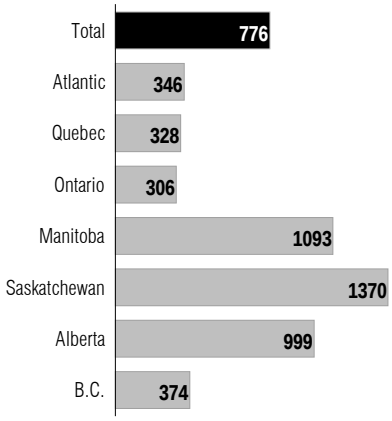


Q.D5a
Currently, is any of your land growing field crops, Christmas trees or orchards?

FIGURE 15

Average number of acres in field crops, Christmas trees or orchards

Farmers April 2006



Q.D5b
How many acres {or hectares} are in field crops, Christmas trees or orchards?
Subsample: Those who have land growing field crops, Christmas trees or orchards (n=997)

There has been a slight increase since 2003 in the proportion of farmers who report having land that is covered with forest or woodland. There has also been an upward trend in the average number of forested acres. Today, 55 percent report having forested land: this proportion is up two points from 2003. The average number of acres covered by forest now stands at 179 acres (compared to 132 acres in 2003 and 101 acres in 2000). The proportion of farmers reporting forest land is highest in Atlantic Canada, Quebec and Ontario, and lowest in Saskatchewan and Alberta. Ontario farmers report a much lower than average acreage of forested land, especially compared to farmers in Alberta and British Columbia. (See Figures 16, 17 and 18.) The average number of acres is much higher among those who manage in excess of 300 acres of land overall.

FIGURE 16

Have land covered with forest or woodland

Farmers 2003 - 2006

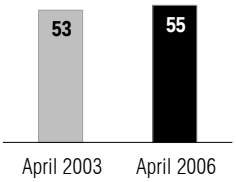
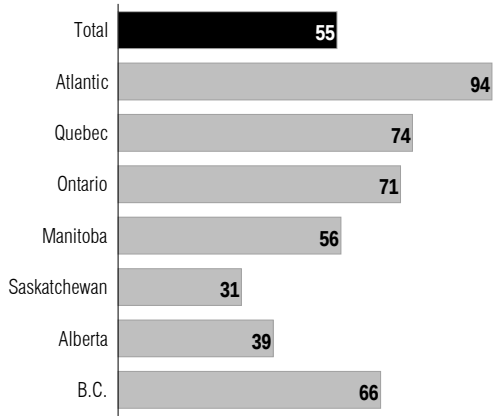


FIGURE 17

Any land covered with forest or woodland

Yes Farmers April 2006

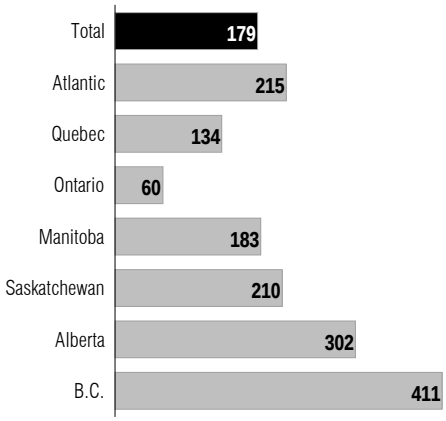


Q.D6a
Currently, is any of your land covered with forest or woodland?
Note: In 2003, the question was: "Currently, is any of the land that you own or rent covered with forest?"

FIGURE 18

Average number of forested acres

Farmers April 2006



Q.D6b
How many acres {or hectares} are covered with forest or woodland?
Subsample: Those who have any land covered with forest or woodland (n=915)

There have been decreases since 2003 in the proportions who report having pasture or grazing land and in the average number of acres left in pasture. Today, 62 percent report having pasture land: this proportion is down three points from 2003. The average number of acres in pasture now stands at 447 acres (compared to 651 acres in 2003). Farmers in Alberta, Manitoba and British Columbia are the most likely to report having pasture land; Quebec farmers are much less likely than average to report having pasture land. The average number of acres is highest in Alberta and Saskatchewan, and lowest in Quebec. (See Figures 19, 20 and 21.) As was the case with forest land, the average number of acres is much higher among those who manage in excess of 300 acres of land overall.

FIGURE 19

Have land left open as pasture or grazing land

Farmers 2003 - 2006

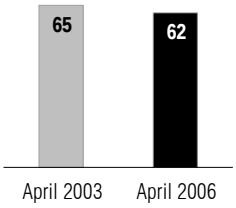
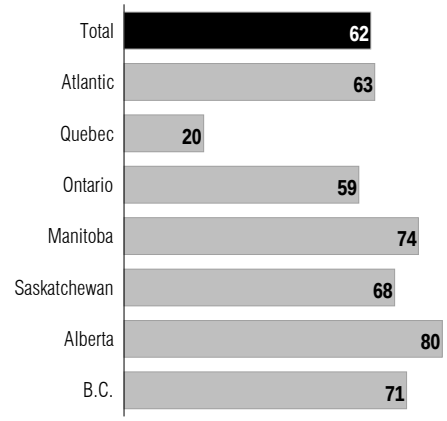


FIGURE 20

Have land left open as pasture or grazing land

Yes Farmers April 2006



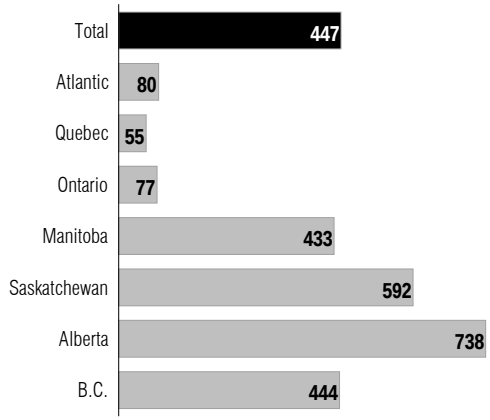
Q.D7a

Currently, is any of your land left open as pasture or grazing land?

FIGURE 21

Average number of acres in pasture or grazing land

Farmers April 2006



Q.D7b

How many acres {or hectares} are left open as pasture or grazing land?

Subsample: Those who have any land left open as pasture or grazing land (n=1,160)

There has been a fairly large decrease since 2003 in the number of farmers, now 19 percent, who report having idle land; this proportion is down 13 points from 2003. However, the average number of idle acres has increased from 59.9 acres in 2003 to 112 acres today. The reported incidence of idle land is highest in British Columbia and lowest in Quebec. The average acreage is also highest in British Columbia, but lowest in Atlantic Canada and Ontario. (See Figures 22, 23 and 24.) Once again, the average number of acres is much higher among those who manage in excess of 300 acres of land overall.

FIGURE 22

Any land left idle

Farmers 2003 - 2006

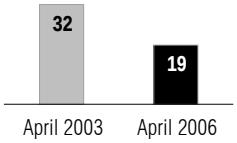
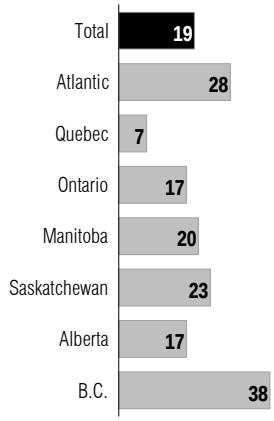


FIGURE 23

Any land left idle

Yes Farmers April 2006



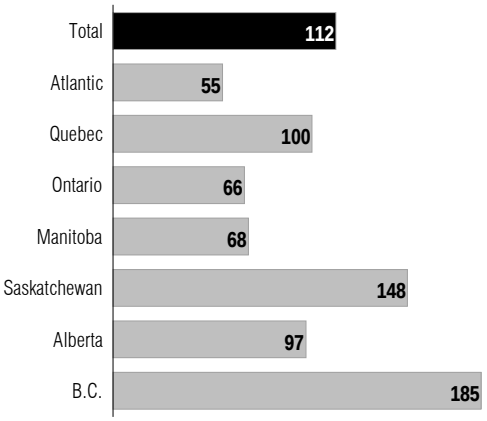
Q.D9a

Not counting any wetland you might own, is any of your land currently left open as idle land?

FIGURE 24

Average number of idle acres

Farmers April 2006



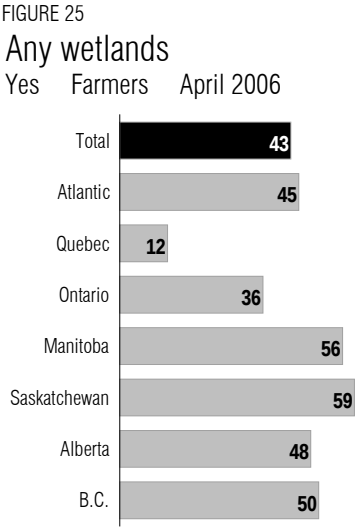
Q.D9b

Not counting wetlands, how many acres {or hectares} of your land are left open as idle land?

Subsample: Those who have any land currently left open as idle land (n=363)

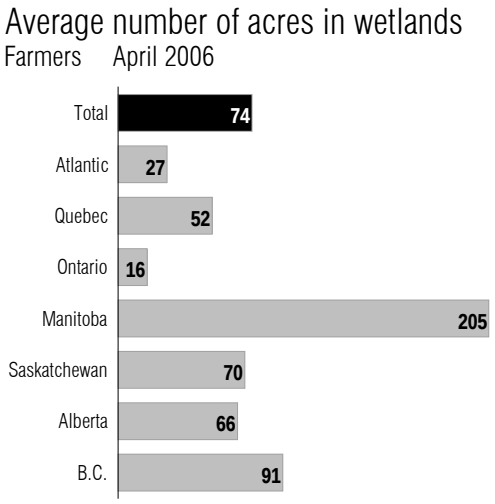
Today, 43 percent of Canadian farmers report having some wetlands; the average number of acres stands at 74. Farmers in Manitoba and Saskatchewan are more likely than average to report having wetlands under their management, but those in Manitoba report much higher average acreages. Quebec farmers are much less likely than average to report managing any wetlands and Ontario farmers report the lowest average acreage of wetlands. (See Figures 25 and 26.)

FIGURE 25



Q.D8a
Do you currently have any wetlands, that is, land that is covered by water, either permanently or seasonally?

FIGURE 26



Q.D8b
How many acres {or hectares} are wetlands?
Subsample: Those who have any wetlands (n=844)

The leading issues

Economic issues dominate farmers' expressed concerns when they are asked about their agricultural operations.

When Canadian farmers are asked, top-of-mind, to name the issues that most concern them regarding their agricultural operation, the largest proportion say, simply, being able to make a living. This number has increased from eight percent in 2003 to 26 percent today. However, one should note the change in question wording from "your own land" to "your agricultural operation." (See Figure 27.)

Today, a total of 34 percent mention issues related to prices, including prices in general (14%), commodity prices in general (8%), grain prices (5%), prices for livestock (4%) and marketing issues (3%). Related tracking data from 2000 indicate there has been an increase in concern over pricing issues.

A total of 16 percent mention issues related to costs, including expenses/input costs (9%), fuel/electricity/machinery costs (4%), costs in general (2%), and land costs (1%). With the exception of expenses/input costs (5% in 2003), these other issues were not raised in 2000 or 2003; they likely emerged in this survey as a result of the above specified change in question wording, which may have led respondents to think in terms of their "bottom line" and because costs, in many areas such as land and fuel, are on an upswing.

A total of five percent mention environmental issues, including environmental issues in general (3%), pollution/chemicals and stewardship of the land (1% each). Another two percent mention drought or water issues; this proportion is down dramatically from 2000 and 2003, which again may be a result of the change in question wording or possibly an acknowledgement of the farm income crisis in Canada.

FIGURE 27

Greatest concern regarding agricultural operation

Farmers Top mentions April 2006

Making a living/profitability/sustainability	26
Prices (unspec.)	14
Expenses/input costs	9
Commodity prices	8
Grain/cereal prices	5
Government restrictions/lack of farmer control	5
Cattle/livestock/lamb/pork prices	4
Disease/BSE/avian flu	4
Fuel/gas/electricity/machinery costs	4
Weather	4
Marketing issues	3
Environmental issues (gen)	3
Other	24

Q.1
Specifically, when you think about your agricultural operation, what is the one issue that causes you the greatest concern?

Five percent mention government restrictions and four percent, each, mention disease/BSE/avian flu and/or the weather. The latter issues did not appear on the radar screen in the previous surveys.

Farmers in Saskatchewan are more likely than average to mention concerns related to commodity prices and to input costs. Quebec farmers are more likely than average to mention land rental costs.

Level of optimism

Seven in ten farmers report a worsening of income opportunities from their land over the past couple of years. Just under four in ten think their situation will worsen further over the next couple of years and an equal proportion think opportunities will stay the same; just two in ten foresee an improvement in economic opportunities.

The survey results paint a rather bleak picture of farmers' perceptions of their economic opportunities, although their view of the future is not quite as pessimistic as is their assessment of their present position.

A majority of 69 percent say the opportunities for income on their farming or ranching operation have worsened over the past couple of years; just 11 percent report improvements and 20 percent say these opportunities have not changed. (See Figure 28.)

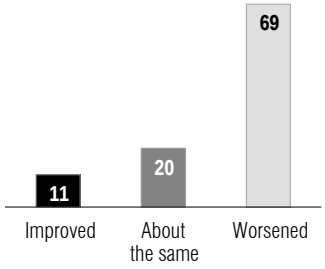
When farmers are asked to look a couple of years into the future, 37 percent predict that their income opportunities will worsen and an equal proportion say opportunities will stay the same. Eighteen percent predict improved prospects. (See Figure 29.)

The most pessimistic assessments of income opportunities over the past couple of years are found in Manitoba and Saskatchewan, but Manitoba farmers are among the most optimistic regarding future prospects. British Columbia farmers are the most positive on both questions. Farmers who report higher farm incomes are slightly more optimistic about the future than are those with lower incomes, but they are not more likely to report improvements over the past few years.

FIGURE 28

Income opportunities from farm or ranch now compared to past couple of years

Farmers April 2006

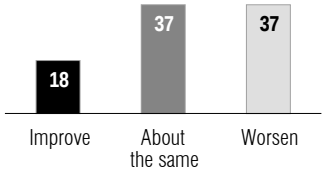


Q.2
Speaking generally, how would you compare the opportunities for income on your farming or ranching operation between now and the past couple of years? Would you say that they …?

FIGURE 29

Income prospects from farm or ranch over next couple of years

Farmers April 2006



Q.3
And what do you think will happen with your farming or ranching income opportunities over the next couple of years? Do you think that they will …?

Openness to new products and techniques

Two in ten farmers report being early adopters of new products and techniques and similar proportions being at the other end of the adoption spectrum, that is, tending to stay with the same products and techniques they've always used.

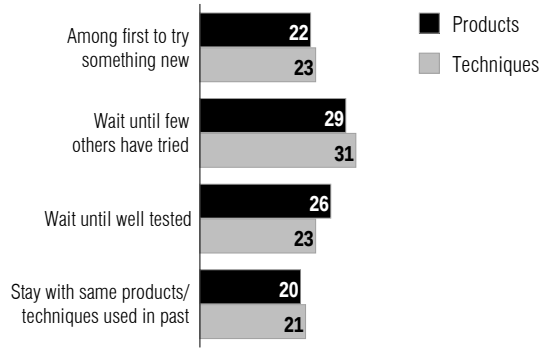
Canadian farmers report a range of attitudes toward new products and techniques. In fact, one might say they are fairly evenly spaced along the adoption spectrum, from those who are early adopters to those who wait for a period in which the product can be "tested" by others, to those who basically ignore innovation.

About one-quarter, each, say their farming or ranching operation tends to be among the first to try new products (22%) and/or new techniques (23%). Three in ten, each, say they like to wait until a few others have tried the new products (29%) and/or new techniques (31%). Another quarter, each, say they like to wait until the new products (26%) and/or new techniques (23%) have been well tested. Two in ten, each, say they tend to stick with the same products (20%) and/or techniques (21%) that they have always used. (See Figure 30.)

FIGURE 30

Approach to introduction of new products and techniques

Farmers April 2006



Q.4a
When it comes to the introduction of new products, does your farming or ranch operation tend to … ?

Q.4b
When it comes to the introduction of new farming or ranching techniques, does your farming or ranch operation tend to … ?

British Columbia farmers are more likely than average to be at either end of the adoption spectrum, especially when it comes to new products. Saskatchewan farmers are the least likely to be new adopters, especially compared to farmers in Atlantic Canada. (See Figure 31.)

As might be expected, younger farmers are less likely to say they always stay with the same products and techniques, but there is no dramatic skew toward older farmers being in a rut, so to speak, and the young ones being eager to try whatever is new. Farmers with a post-secondary education are more likely than average to be early adopters of new products and techniques.

FIGURE 31

Approach to introduction of new products and techniques

Farmers April 2006

	Total	Atlantic	Quebec	Ontario	Manitoba	Sask.	Alberta	B.C.
Products								
Among first to try something new	22	31	21	22	23	17	22	31
Wait until few others have tried	29	30	26	28	30	35	30	18
Wait until well tested	26	19	27	29	32	23	26	18
Stay with same products used in past	20	20	23	18	10	21	18	28
Techniques								
Among first to try something new	23	31	21	22	25	18	24	31
Wait until few others have tried	31	33	26	30	26	38	31	23
Wait until well tested	23	22	24	25	28	20	22	19
Stay with same techniques used in past	21	13	26	22	18	20	20	25

Q.4a
When it comes to the introduction of new products, does your farming or ranch operation tend to … ?

Q.4b
When it comes to the introduction of new farming or ranching techniques, does your farming or ranch operation tend to … ?

Reported incidence of specific land use practices

Majorities report using crop rotation, nutrient management plans, and no till or reduced tillage. However, in most cases, from about two to four in ten believe the environmentally-sound land use practices included in the survey are not applicable to their agricultural operations.

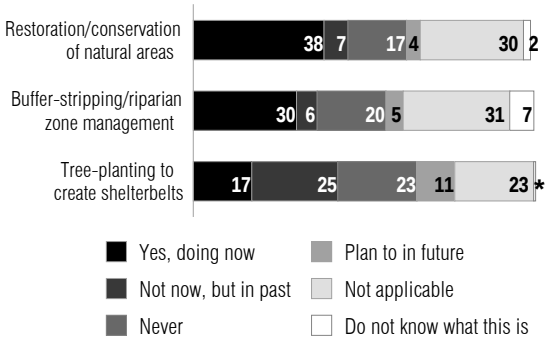
The survey results indicate that there may be a need for public education efforts to inform farmers about a range of environmentally-sound land use practices. Of the 13 possible land use and management practices reviewed in this survey, three are being undertaken (or have been undertaken) by a majority of the farmers. With the remaining practices that could apply to their operation, farmers are more likely to say the practice would not be applicable to their agricultural operations than they are to say they simply are not undertaking the practice.

Among all Canadian farmers, just over four in ten or more report that they are currently, or have in the past, contributed to the restoration or conservation of natural areas (45%), and/or planted trees to create shelterbelts (42%). About one-third report undertaking buffer-stripping or riparian zone management (36%). (See Figure 32; also see Figure 35 on page 28.)

FIGURE 32

Land use practices

Farmers April 2006



* Less than one percent

Q.6a-c

I would now like to ask you about some specific management and land use practices. For each one, can you please tell me if you have ever done this, if you plan to do this in the future, or is it not applicable to your land … Buffer-stripping or riparian zone management … Tree-planting to create shelterbelts … Restoration or conservation of natural areas.

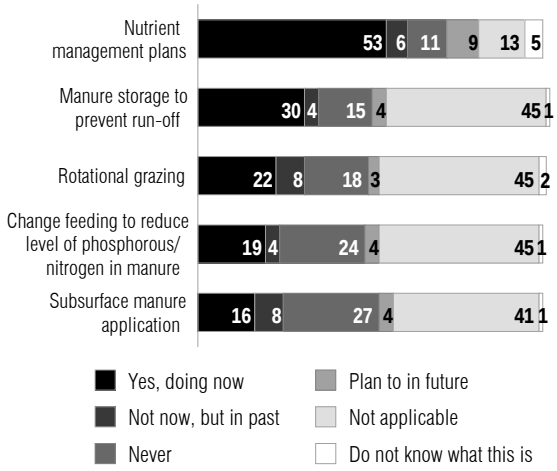
Among farmers whose agricultural operations concentrate on field crops, dairy and poultry, a majority report doing nutrient management plans (59%). About one-third, each, report using manure storage to prevent run-off (34%) and/or rotational grazing (30%). One-quarter, each, report using subsurface manure application (24%), and/or changing the feed they use in order to reduce the level of phosphorous or nitrogen in manure (23%). (See Figure 33; also see Figure 35 on page 38.)

Among farmers whose agricultural operations concentrate on cattle, pigs, other livestock or horticulture, substantial majorities report using crop rotations to reduce nutrient application and/or improve soil quality (76%), no till or reduced tillage (60%) and/or nutrient management plans (59%). About half report doing permanent cover of marginal crop land (47%), four in ten report using integrated pest management (39%). However, just two in ten report having postponed a harvest in the interest of wildlife habitat (18%). (See Figure 34; also see Figure 35 on page 38.)

FIGURE 33

Land use practices

Farmers April 2006



Q.6d-h

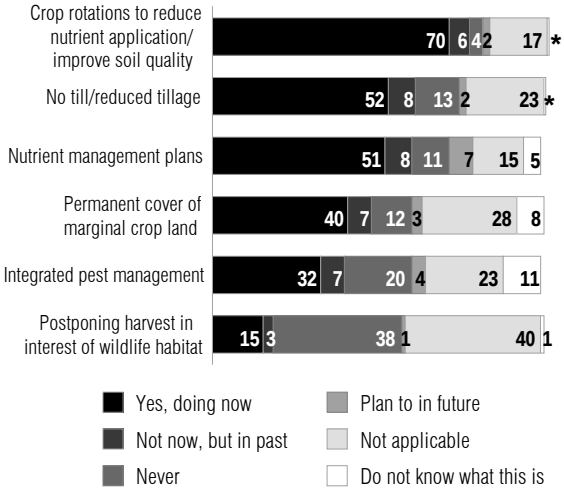
I would now like to ask you about some specific management and land use practices. For each one, can you please tell me if you have ever done this, if you plan to do this in the future, or is it not applicable to your land … Rotational grazing … Subsurface manure application (this means injection or some form of mixing) … Manure storage to prevent run-off … Nutrient management plans … Change in feeding to reduce the level of Phosphorous or Nitrogen in manure.

Subsample: Those who described their farm/ranch operation as field crops, milk or poultry (n=871)

FIGURE 34

Land use practices

Farmers April 2006



* Less than one percent

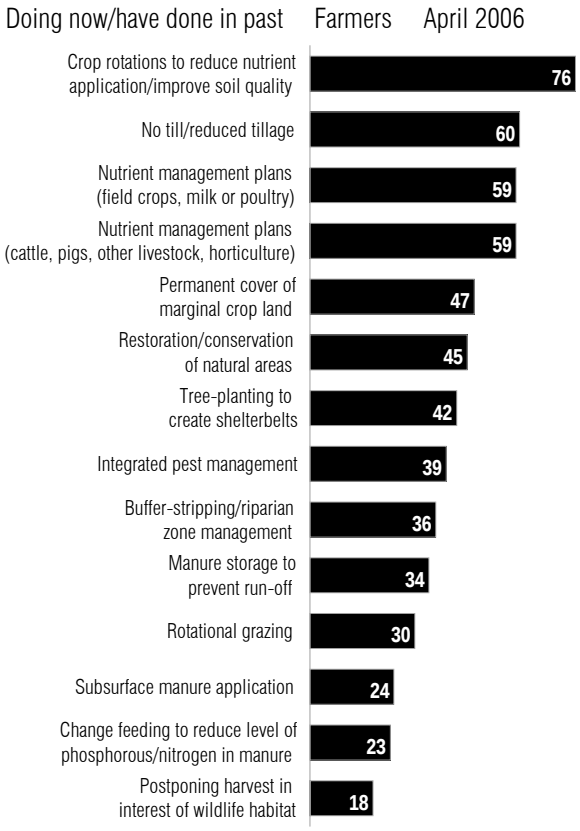
Q.6i-n

I would now like to ask you about some specific management and land use practices. For each one, can you please tell me if you have ever done this, if you plan to do this in the future, or is it not applicable to your land … Permanent cover of marginal crop land … No till or reduced tillage … Nutrient management plans … Integrated pest management … Crop rotations to reduce nutrient application and/or improve soil quality … Postponing the harvest in the interest of wildlife habitat.

Subsample: Those who described their farm/ranch operation as cattle, pigs, other livestock or horticulture (n=565)

FIGURE 35

Land use practices



Q.6

I would now like to ask you about some specific management and land use practices. For each one, can you please tell me if you have ever done this, if you plan to do this in the future, or is it not applicable to your land …?

Quebec farmers are more likely than average to report having contributed to the restoration or conservation of natural areas, planting trees to create shelterbelts, undertaking buffer-stripping or riparian zone management, and using manure storage to prevent run-off. Saskatchewan farmers are noticeably less likely than average to report undertaking buffer-stripping or rotational grazing, or using manure storage to prevent run-off or using subsurface manure application; they tend to think these are not applicable to their agricultural operations. However, they are more likely than average, along with farmers in Manitoba, to report permanent cover of marginal crop land. Manitoba farmers are less likely than average to report using integrated pest management. Reported use of nutrient management plans is higher than average in Atlantic Canada. The reported use of subsurface manure application is higher than average in Ontario. (See Figure 36 on page 29.)

FIGURE 36

Land use practices

Doing now/have done in past Farmers April 2006

	Total	Atlantic	Quebec	Ontario	Manitoba	Sask.	Alberta	B.C.
Crop rotations to reduce nutrient application/improve soil quality	76	74	69	76	74	73	87	69
No till/reduced tillage	60	49	59	62	61	64	66	41
Nutrient management plans (field crops, milk or poultry)	59	76	57	53	48	61	65	74
Nutrient management plans (cattle, pigs, other livestock, horticulture)	59	81	51	59	59	56	63	58
Permanent cover of marginal crop land	47	36	31	29	72	74	56	37
Restoration/conservation of natural areas	45	38	65	38	39	45	47	48
Tree-planting to create shelterbelts	42	28	29	33	58	53	52	28
Integrated pest management	39	52	43	45	26	34	37	39
Buffer-stripping/riparian zone management	36	51	68	33	26	23	30	39
Manure storage to prevent run-off	34	42	65	52	19	11	19	27
Rotational grazing	30	42	35	36	23	20	34	33
Subsurface manure application	24	21	27	32	23	16	22	21
Change feeding to reduce level of phosphorous/nitrogen in manure	23	34	42	28	23	12	12	12
Postponing harvest in interest of wildlife habitat	18	21	31	13	26	19	13	23

Q.6

I would now like to ask you about some specific management and land use practices. For each one, can you please tell me if you have ever done this, if you plan to do this in the future, or is it not applicable to your land …?

Perceived economic benefits of specific land use practices

A plurality of just under five in ten farmers say the economic benefits from the adoption of the environmentally-sound land use practices included in the survey were about what they expected; one-quarter say they found no benefits. Just ten percent associated costs with the adoption of these practices.

For the most part, Canadian farmers feel they got the economic benefits they were expecting as a result of adopting environmentally-sound land use practices, although a significant proportion felt there were no economic payoffs. Very few report better than expected – or worse than expected – economic consequences from undertaking these practices. Perhaps more importantly, few felt these had been costly undertakings, a finding that addresses one of the obvious potential barriers to farmers adopting these practices.

Among all farmers who reported undertaking one or more of the specific land use practices detailed in the previous section of this report, a plurality of 46 percent say the economic benefits were about what they expected; nine percent describe the economic benefits as better than expected, six percent say these were less than expected, and 25 percent say there were no benefits. Just ten percent say these practices resulted in costs to their agricultural operations. (See Figure 37.)

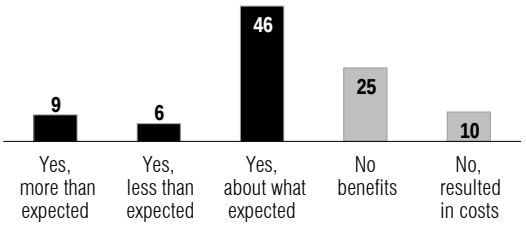
Quebec farmers are much more likely than average to report better-than-expected economic payoffs, although they are also more likely to say they incurred costs.

The perception of better-than-anticipated economic payoffs is more widespread than average among farmers who report using manure storage to prevent run-off, and among those who have changed their feed to reduce the level of phosphorous or nitrogen in manure.

FIGURE 37

Perceived economic benefit of land use practices

Farmers April 2006



Q.7
Thinking again about the management and land use practices I just asked you about, would you say that your decision to take action on any of these resulted in any economic benefits for yourself as a farmer or rancher?
Subsample: Those who are doing, or have done in the past, any of the specific management and land use practices described in Q.6 (n=1,590)

Influence of impact on neighbours' lands

Fewer than half of Canadian farmers say that their land management decisions are influenced by their possible impact on their neighbours' lands. This proportion has declined steadily since 2000.

There has been a steady erosion of one of the most basic tenets of land stewardship, namely, the belief that land use decisions should take into account the impact on surrounding lands.

Today, 45 percent of Canadian farmers say that their land management decisions are influenced by their possible impact on their neighbours' lands. This proportion is down six points from 2003 and a total of 11 points from 2000. A majority of 53 percent say they do not consider the impact on their neighbours' lands. (See Figure 38.)

Atlantic Canadian farmers are more likely than average to say they do consider the impact on surrounding lands. Quebec farmers are much more likely than average to say they do not take this into consideration. (See Figure 39.)

FIGURE 38

Effect on neighbours' land impacts decisions

Farmers 2000 - 2006

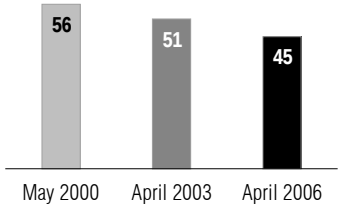
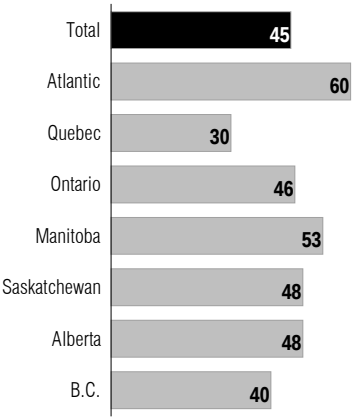


FIGURE 39

Effect on neighbours' land impacts decisions

Yes Farmers April 2006



Q.5
When you make decisions about activities on your farm or ranch operation, does the effect on your neighbours' land have an impact on your land use decisions?

Perceptions of benefits of environmentally-sound practices

Opinion is evenly divided on the question of who benefits the most – the farmer or the general public – from the adoption of environmentally-sound agricultural practices. But, clearly, there is a sense that the benefits do extend beyond the agricultural operation that undertakes the practices.

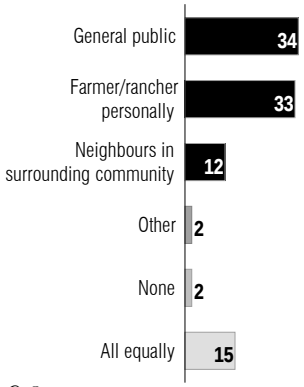
Generally speaking, the survey finds no clear consensus on the question of who benefits the most when farmers adopt environmentally-sound agricultural practices. However, by adding together the proportion who say the general public benefits the most and the proportion who say it is the farmer's neighbours, one can conclude that a clear plurality do see the ripple-out benefits of undertaking these kinds of practices.

When farmers are asked who benefits the most from the adoption of practices that benefit the environment, 34 percent say it is the general public and 33 percent say it is the farmer. Another 12 percent say it is the farmer's neighbours. Fifteen percent say all benefit equally. Just two percent say none of these benefit. (See Figure 40.)

FIGURE 40

Benefits most from farmers' practices that help environment

Farmers April 2006



Q.8a

When a farmer or rancher such as yourself adopts practices that benefit the environment, which one of the following do you think benefits most …?

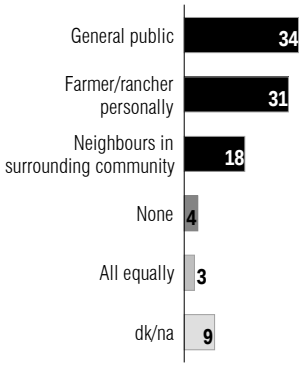
Among farmers who believe the general public benefits the most, a majority of 56 percent believe this is at the expense of the farmer and 26 percent say it is at the expense of the farmer's neighbours. Among those who believe the farmer benefits the most, 66 percent say it is the general public that benefits least, and 17 percent say the neighbours benefit least. (See Figure 41 for results for all farmers.)

There is a consensus in Atlantic Canada, Ontario and Manitoba that the general public benefits the most. In Alberta, a plurality say the farmer benefits the most. Quebecers are more likely than average to say that all benefit equally. (See Figure 42.)

FIGURE 41

Benefits least from farmers' practices that help environment

Farmers April 2006



Q.8b
And who do you think benefits the least …?
Subsample: Those who gave a single, specific response in Q.8a (n=1,448)

FIGURE 42

Benefits most from farmers' practices that help environment

Farmers April 2006

	Total	Atlantic	Quebec	Ontario	Manitoba	Sask.	Alberta	B.C.
General public	34	39	22	37	38	38	31	29
Farmer/rancher personally	33	17	27	27	29	40	43	31
Neighbours in surrounding community	12	17	8	14	15	9	12	14
Other	2	3	3	2	2	2	1	1
None of these	2	2	1	2	3	1	*	3
All equally	15	20	35	15	12	8	10	17
dk/na	3	2	4	2	2	3	3	5

*Less than one percent

Q.8a
When a farmer or rancher such as yourself adopts practices that benefit the environment, which one of the following do you think benefits most …?

Interest in environmentally-sound practices

Eight in ten farmers express interest in learning more about environmentally-sound practices. Seven in ten are interested in actually adopting some of these practices. Interest is highest for the areas of improving water quality, soil enhancement and promoting rural values.

The survey finds high levels of interest, not only in learning more about environmentally-sound land use practices, but also in actually adopting some of these practices (even when farmers are reminded that this might mean investments of time or money on their part). An analysis of the areas of most interest – improving water quality, soil enhancement and promoting rural values – suggests that farmers do see this type of activity having real benefits for them and that this may be the way in which to promote these practices. There is less expressed interest in the more altruistic areas of reducing greenhouse emissions, plant and animal diversity, and wildlife habitat.

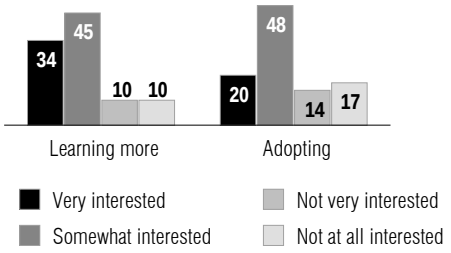
A majority of 79 percent of farmers say they would be very (34%) or somewhat (45%) interested in learning more about farm management and land use practices that benefit the environment and society at large; 20 percent express little or no interest. (See Figure 43.)

A majority of 68 percent say they would be very (20%) or somewhat (48%) interested in actually adopting, for themselves, new management and land use practices that benefit the environment and society at large, even if this might mean investments of time or money on their part; 31 percent indicate they would not be interested in actually adopting these new practices. (See Figure 43.)

FIGURE 43

Interest in environmentally-sound practices

Farmers April 2006



Q.9

Are you very, somewhat, not very or not at all interested in … Learning more about farm management and land use practices that benefit the environment and society at large … Actually adopting, for yourself, new management and land use practices that benefit the environment and society at large, even if this might mean investments of time or money on your part?

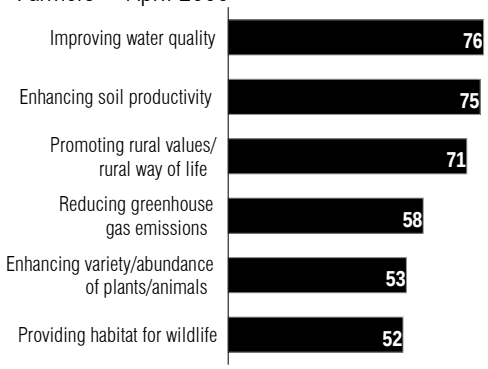
Among those who say they are at least somewhat interested in adopting new practices, the largest proportions say they would consider taking action in the areas of improving water quality (76%), enhancing soil productivity (75%), and promoting rural values and the rural way of life (71%). Of lesser interest in terms of the likelihood of actionable involvement, are the areas of reducing greenhouse gas emissions (58%), enhancing the variety and abundance of plants and animals (53%), and providing habitat for wildlife (52%). (See Figure 44.)

Strongly expressed interest in learning more about environmentally-sound practices is more widespread in Atlantic Canada and Quebec than in the other provinces. A strongly expressed commitment to taking action is also more pronounced in British Columbia and, even more so, in the provinces east of Ontario. It is interesting to note that Quebec farmers are less likely than average to say they would consider taking action in any of the specific areas included in the survey. Farmers in Saskatchewan, Alberta and British Columbia express slightly higher than average levels of interest in promoting rural values. (See Figure 45.)

FIGURE 44

Would consider taking action

Farmers April 2006



Q.10
You've said that you're interested in adopting new management and land use practices. Keeping in mind that you might have to invest some time, and possibly some money, which of the following areas, if any, would you consider taking action on …?
Subsample: Those who are interested in adopting the farm management and land use practices described in Q.9b (n=1,204)

FIGURE 45

Would consider taking action

Farmers April 2006

	Total	Atlantic	Quebec	Ontario	Manitoba	Sask.	Alberta	B.C.
Improving water quality	76	78	58	79	73	78	82	78
Enhancing soil productivity	75	81	49	74	80	82	83	79
Promoting rural values and the rural way of life	71	73	43	68	67	81	81	81
Reducing greenhouse gas emissions	58	67	45	55	58	70	61	50
Enhancing the variety and abundance of plants and animals on your land	53	58	31	44	59	67	64	49
Providing habitat for wildlife	52	54	25	41	62	66	63	57

Q.10
You've said that you're interested in adopting new management and land use practices. Keeping in mind that you might have to invest some time, and possibly some money, which of the following areas, if any, would you consider taking action on …?
Subsample: Those who are interested in adopting the farm management and land use practices described in Q.9b (n=1,204)

Environmental programs

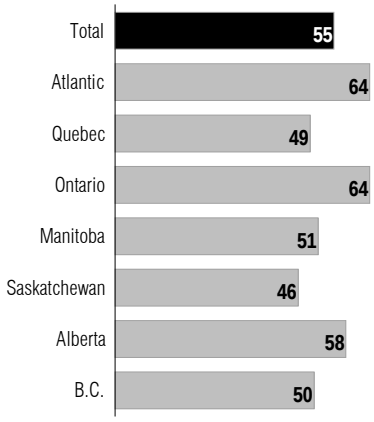
Over five in ten farmers express awareness of environmental programs for which they might be eligible. Two in ten Canadian farmers report they are currently participating in such a program and a slightly smaller proportion say they have participated in such a program in the past. Just one-third of those who are aware of these programs report no involvement. Involvement in these programs is primarily motivated by reasons related to environmental and conservation concerns, but three in ten participants mention financial and productivity considerations. Failure to participate is almost equally attributed to financial considerations and lack of time.

The results of the survey suggest there is need for further education regarding environmental programs, but that there is a fairly solid base upon which these education efforts can be built. The survey results also indicate that most farmers have, at one time or another, taken advantage of these kinds of programs: among those who express awareness, just one-third say they have never participated.

A majority of 55 percent of farmers report being aware of environmental programs, offered by either governments or private organizations, for which they would be eligible. Awareness is highest in Atlantic Canada and Ontario, and lowest in Quebec and Saskatchewan. (See Figure 46.) It is also lower among farmers aged 18 to 24 and 65 or older.

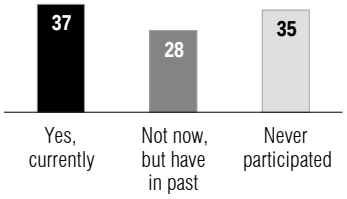
Among farmers who express awareness of these environmental programs, a total of 65 percent are either currently participating in one or more programs (37%, or 20% of all Canadian farmers) or have done so in the past (28%, or 15% of all farmers). Among those who are aware of these programs, 35 percent report that they have never participated. (See Figure 47.)

FIGURE 46
Aware of environmental programs
Yes Farmers April 2006



Q.11a
Are you aware of any environmental programs, offered by either governments or private organizations, for which you would be eligible?

FIGURE 47
Participation in environmental programs
Farmers April 2006

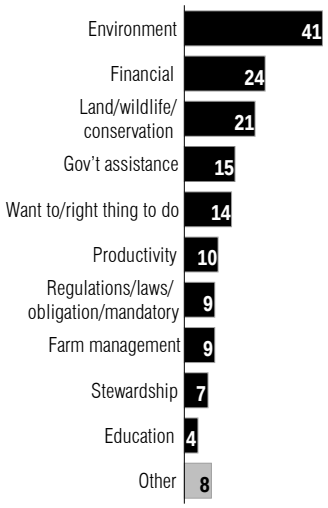


Q.11b
Are you currently participating in these programs, or have you done so in the past?
Subsample: Those who are aware any environmental programs, offered by either governments or private organizations, for which they would be eligible (n=962)

FIGURE48X

Main reasons for participating

Farmers April 2006



Q.11c
What are the main two or three reasons why you are participating in these programs?
Subsample: Those who are aware of any environmental programs, offered by either governments or private organizations, for which they would be eligible – and who currently participate in these programs (n=344)

Reported rates of current participation are higher than average in Quebec. Failure to participate appears to be higher than average in Saskatchewan, Alberta and British Columbia. Reported rates of any participation are higher among those reporting higher farm incomes, a finding that suggests the presence of economic barriers (real or imagined) to participation in environmental programs.

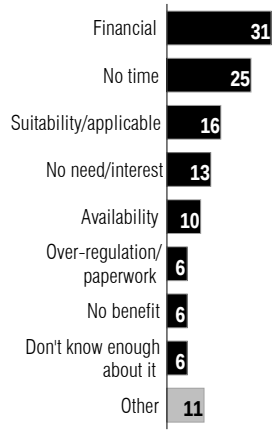
When farmers are asked why they chose to participate in an environmental programs, the largest proportions cite considerations related to the environment and conservation. However, significant proportions also mention financial, productivity and farm management considerations. (See Figure 48.)

When farmers are asked why they chose not to participate in any environmental programs, non-participants are more likely to cite considerations related to finances and lack of time than to a feeling that the programs are not applicable to their operations or to lack of interest. Relatively few say they see no benefits to these kinds of programs or that they did not have enough information about the programs. (See Figure 49.)

FIGURE 49

Main reasons for not participating

Farmers April 2006



Q.11d
What are the main two or three reasons you are not currently participating in any of these programs?
Subsample: Those who are aware of any environmental programs, offered by either governments or private organizations, for which they would be eligible – and who are not currently participating, or never participated, in these programs (n=612)

Familiarity with the term

Aided awareness of the term "ecological goods and services" stands at 47 percent of Canadian farmers; unaided at 25 percent.

Name recognition awareness of "ecological goods and services" is fairly low, but almost half report at least some familiarity with the term when they are given a definition. There is a substantial base on which to build public communications, but the results suggest that most farmers likely have only a rather vague sense of what the term actually means for them in their agricultural operations.

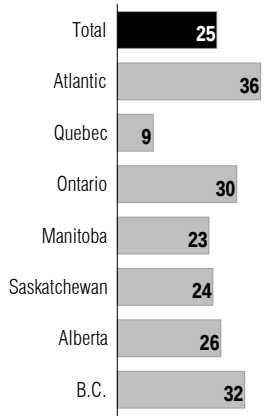
When asked, top-of-mind, 25 percent of Canadian farmers say they are familiar with the term "ecological goods and services." Among those who are unfamiliar with the term, 30 percent (22% of all farmers) say that the definition of "ecological goods and services" given to them in the interview sounds familiar. Taken together, these findings show that aided awareness of the term "ecological goods and services" stands at 47 percent of Canadian farmers. (See Figures 50 and 51.)

Unaided awareness is noticeably lower than average in Quebec and higher in Atlantic Canada, Ontario and British Columbia. It is also higher among those with a post-secondary education, and among those who see their own management and land use activities providing broader benefits to the general public.

FIGURE 50

Familiar with term "ecological goods and services"

Yes Farmers April 2006

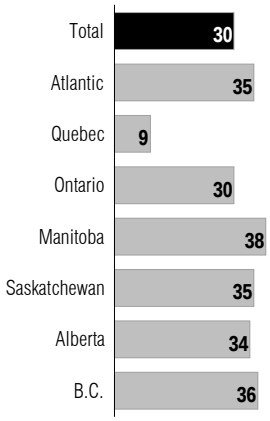


Q.12a
Are you familiar with the term "ecological goods and services"?

FIGURE 51

Familiar with description of term "ecological goods and services"

Yes Farmers April 2006



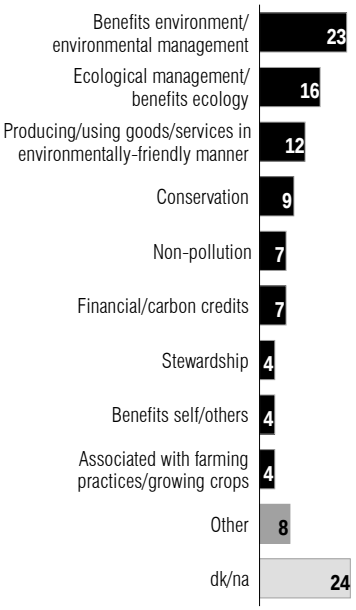
Q.12c
Through certain management and land use practices, farmers and ranchers are able, either directly or indirectly, to provide goods and services that benefit the general public. Does this description of ecological goods and services sound familiar to you?
Subsample: Those who are not familiar with the term "ecological goods and services" (n=1,327)

When those who indicate top-of-mind familiarity with the term "ecological goods and services" are asked to describe what the term means to them, the largest proportions refer to "benefiting the environment," "ecological management," and producing or using goods in an environmentally-friendly way." However, 24 percent offer no opinion on the question. (See Figure 52.)

FIGURE 52

Meaning of term "ecological goods and services"

Farmers April 2006



Q.12b
Can you briefly describe what this term means to you?
Subsample: Those who are familiar with the term "ecological goods and services" (n=453)

Perceived barriers

A majority of 57 percent of farmers say that financial factors get in the way of farmers and ranchers like themselves undertaking the kind of environmentally-sound management and land use practices that, directly or indirectly, provide benefits to the general public.

The results of the survey indicate that the overwhelming barrier to the adoption of environmentally-sound management and land use practices are perceptions regarding the financial costs involved with doing so. No other considerations even come close in terms of imposing mental barriers to the promotion of environmentally-sound practices, even among those who reported enjoying economic benefits from having undertaken environmentally-sound practices (See *Perceived economic benefits of specific land use practices*).

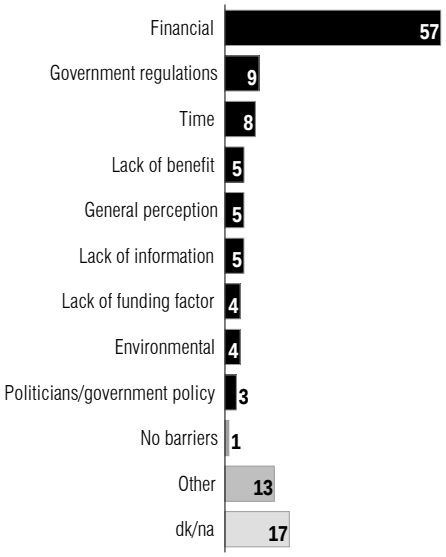
It is interesting to note that, although just one percent actually say there are no barriers, two in ten farmers offer no response to the question. This finding may indicate that a significant minority have not articulated, in their own minds, barriers to integrating the concept of ecological goods and services into their land management practices.

When Canadian farmers are asked to name the main factors that get in the way of rural landowners like themselves undertaking management and land use practices that, directly or indirectly, provide benefits to the general public, the largest proportion by far – 57 percent – name a financial consideration. About one in ten, each, mention government regulations and time considerations. Seventeen percent offer no opinion on the question. (See Figure 53.) Quebec farmers are much less likely than average to offer a response to the question.

FIGURE 53

Main barriers to environmentally-sound practices

Farmers April 2006



Q.13
What would you say are the main factors that get in the way of farmers and ranchers like yourself undertaking the kind of environmentally-sound management and land use practices that, directly or indirectly, provide benefits to the general public?

Perceived benefits of current practices

Seven in ten Canadian farmers believe that their current management and land use activities provide broader benefits to the general public, primarily in the areas of improving water and air quality, conserving wildlife habitat, preventing erosion, healthier food and using fewer chemicals.

There is a consensus among farmers that they already play an important role in the overall quality of Canadians' lives.

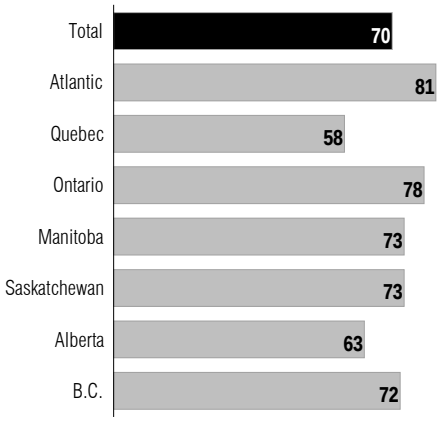
A substantial majority of 70 percent of Canadian farmers believe that their current management and land use activities provide broader benefits to the general public. (See Figure 54.) This perception is more widely held in Atlantic Canada and Ontario than in Quebec and Alberta. (See Figure 54.)

When farmers who see their practices as benefiting the environment are asked for specifics, the largest proportion mention the improvement of water quality. Between one and two in ten, each, mention the conservation of wildlife habitat, improving air quality, preventing erosion, healthier food, the use of fewer chemical and a better environment in general. (See Figure 55.)

FIGURE 54

Current management/land use activities provide benefits to public

Yes Farmers April 2006



Q.14a
Thinking now about your current management and land use activities, do you see these as providing broader benefits to the general public?

Farmers in Ontario, Atlantic Canada and Manitoba are more likely than average to mention benefits in the area of water quality. Farmers in Alberta and British Columbia are more likely than average to mention wildlife conservation. Atlantic Canadian farmers are more likely than others to mention the use of fewer chemicals. Quebec farmers are more likely than average to mention a better overall environment.

FIGURE 55

Benefits of current management/ land use activities

Farmers April 2006

Better water quality	24
Conservation of wildlife/wildlife lands	15
Better air quality	14
Less erosion (water/wind/soil)	13
Better/healthier food quality	12
Less chemicals/fertilizers/food additives/ organic food	12
Better environment	9
Economics/income/cheap food	7
Sustainability	6
Productivity	6
Aesthetics	6
Greenhouse gas emissions reduction	5
Crop rotation/fallow field/re-seed/reforestation	5
Less or no tillage	5
Less fuel	4
Better/healthier/cleaner soil	4
Recreation/hunting	3
Providing food/goods/services	3
Better knowledge/appreciation of farming/farmers	3
Good for community/ public (general)	3
Other	13
dk/na	14

Q.14b
Can you tell me what two or three of these benefits might be?
Subsample: Those who believe that their current management and land use activities provide broader benefits to the general public (n=1,281)

Perceived personal responsibility

Almost nine in ten farmers say farmers and ranchers like themselves have at least some responsibility when it comes to undertaking management and land use practices that benefit the environment, even when they are not compensated financially for doing so; more than four in ten feel they have a great deal of responsibility to be environmentally responsible.

There is almost a unanimous consensus among farmers that they do have a responsibility to the environment. The strength of this belief is underscored by the finding that almost half go so far as to say they have a great deal of responsibility. When Environics' national Focus Canada survey (2005-1 edition, March 2005) asked Canadians who has the primary responsibility for protecting the environment in Canada, a plurality of 36 percent said it is the federal government; 29 percent said individual Canadians, and one in ten or fewer each pointed to their provincial government, private industry or environmental groups.

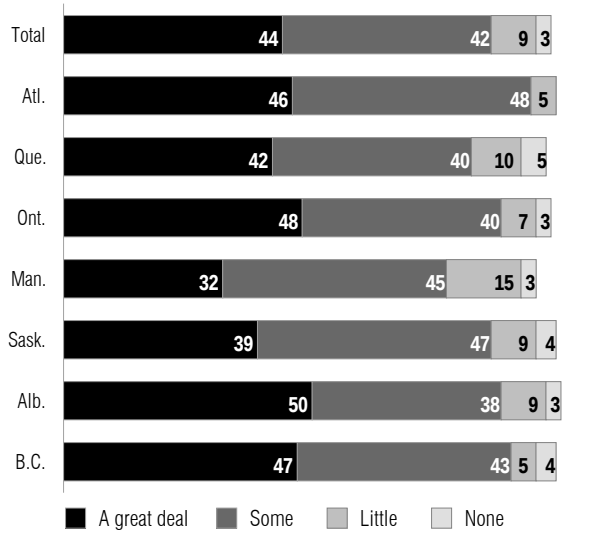
A majority of 86 percent say that farmers and ranchers like themselves have at least some responsibility – including 44 percent who say they have a great deal of responsibility – when it comes to undertaking management and land use practices that benefit the environment, even when they are not compensated financially for doing so. (See Figure 56.)

These findings are consistent across the country, although Alberta farmers tend to feel a greater than average sense of responsibility, especially compared to their peers in Manitoba. Those who feel their activities are already benefiting the environment also tend to report a greater sense of environmental responsibility.

FIGURE 56

Responsibility for environmentally-sound land use practices without compensation

Farmers April 2006



Q.15

How much responsibility do you think farmers and ranchers like yourself have when it comes to undertaking management and land use practices that benefit the environment even when they are not compensated financially for doing so …?

Potential impact of specific factors

Approximately three-quarters of Canadian farmers, each, say they would be convinced to adopt environmentally-sound land management practices if they were given financial incentives (such as direct payments from a government or other program, or tax credits), or if there were higher prices for agricultural commodities produced with sound environmental management practices, or if their farm or ranch incomes were higher than they are now. A slightly smaller proportion say they would be convinced by a general sense of pride in being a steward of their land.

Financial incentives outweigh other potential incentives to encourage the adoption of environmentally-sound land management practices, although they can also be convinced by more altruistic appeals, and by access to technical information and new technologies. Less convincing are peer comparisons and government regulations.

When farmers are asked if a number of specific factors would convince them to adopt environmentally-sound land management practices, approximately three-quarters, each, respond positively to financial incentives (such as direct payments from a government or other program, or tax credits), to higher prices for agricultural commodities produced with sound environmental management practices, and to the suggestion that they would change their practices if their farm or ranch incomes were higher than they are now. However, only a slightly smaller proportion say they would be convinced by a general sense of pride in being a steward of their land. (See Figure 57.)

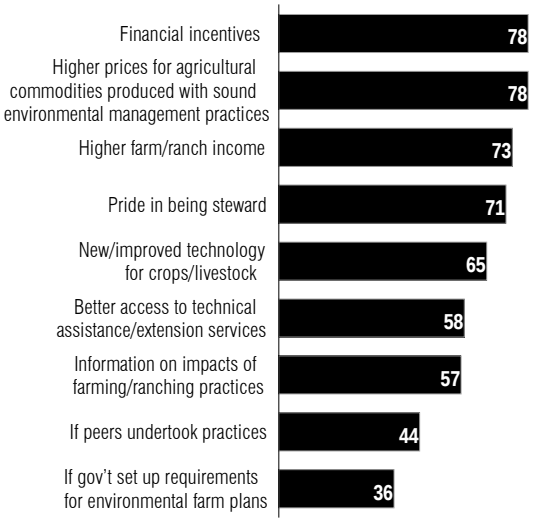
Majorities also say they would be convinced if there were new or improved technologies for crops and/or livestock, and if they had better access to technical assistance and extension services, and information on the impacts of farming or ranching practices on the environment. About four in ten, each, say they would be convinced if their peers undertook these kinds of practices and if the government set requirements for environmental farm plans. (See Figure 57.)

Quebec farmers are less likely than others, especially than those in Saskatchewan and Alberta, to say they would be convinced by any of these possible inducements to adopting environmentally-sound land management practices. Those who believe their activities are already beneficial to the environment are also more likely to say these incentives would encourage their adoption of environmentally-sound land management practices.

FIGURE 57

Would convince to adopt environmentally-sound land management practices

Farmers April 2006



Q.17

For you personally, which of the following factors, if any, would likely convince you to adopt environmentally-sound land management practices … Financial incentives, such as direct payments from a government or other program, or tax credits … A general sense of pride in being a steward of your land … If the government set requirements for environmental farm plans … Information on the impacts of farming or ranching practices on the environment … New or improved technology for crops and/or livestock … Better access to technical assistance and extension services … If your peers undertook these kinds of practices … Higher prices for agricultural commodities produced with sound environmental management practices … If your farm or ranch income were higher than it is?

Financial support

Opinion is quite divided on the question of "grandfathering" financial support programs for farmers who have undertaken environmentally-sound land management activities in the past, but a slight plurality are in favour of the proposal.

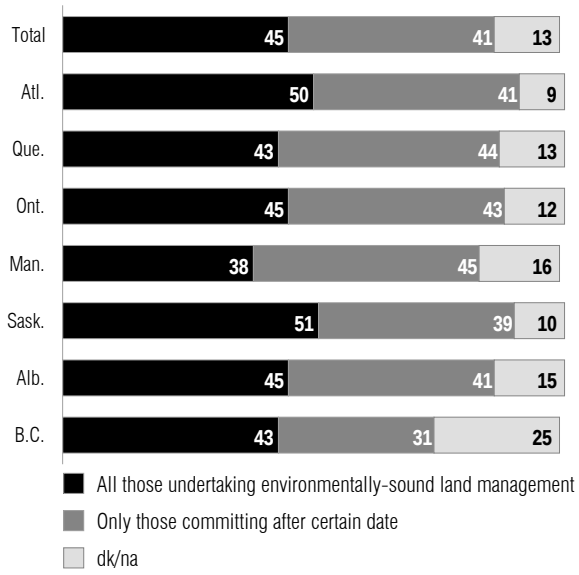
A slight plurality of 45 percent say financial support should be extended to those who have undertaken environmentally-sound land management activities in the past, even if that means there is less money to extend the program into the future. Forty-one percent say support should be limited to those making commitments after a certain date, so there will be more money for those undertaking environmentally-sound management in the future. Thirteen percent offer no opinion on the question. (See Figure 58.)

Support for "grandfathering" financial support programs is slightly lower in Manitoba.

FIGURE 58

Should be covered by financial support program for environmentally-sound land management practices

Farmers April 2006



Q.16
If a financial support program were to be offered to farmers and ranchers who agree to manage their land for environmental objectives, should the program … Be extended to those who have undertaken environmentally-sound land management activities in the past, even if that means there is less money to extend the program into the future … Be limited to those making commitments after a certain date, so there will be more money for those undertaking environmentally-sound management in the future?

Conclusions

The primary purpose of this study was to provide policy-makers and program developers with current data to assist them in the development of stewardship polices and programs, with an emphasis on the promotion of ecological goods and services. It was also designed to build upon baseline and tracking data from earlier surveys of Canadian farmers and ranchers. Among the key areas of investigation for this survey are an exploration of the current economic and environmental "mindsets" among farmers and ranchers, current land management practices, awareness of and interest in ecological goods and services, and motivations and barriers influencing the adoption of environmentally-sound land management practices.

The survey results confirm that Canadian farmers already see themselves as playing an important role in conserving, protecting and improving the environment. However, the environment is not a leading top-of-mind issue when they think about their agricultural operations. Many see themselves as struggling to survive financially – this is true even for those who report relatively high farm incomes – and this fact will have to be a major consideration in the promotion of any programs related to ecological goods and services.

Canadian farmers are quite evenly spread along the adoption continuum when it comes to the adoption of new agricultural products and services, from those who are early adopters to those who prefer to wait until they are satisfied that a product or service has been well tested in the marketplace. The survey results suggest that the promotion of ecological goods and services should find a receptive audience among three-quarters or more of farmers and ranchers, provided communications are flexible enough to appeal to both the one-quarter who are willing to try something new and the half who need to know that relatively little risk is involved before they adopt new products or techniques.

Promotion efforts will also have to focus on the applicability of environmentally-sound practices to a wide range of agricultural operations. The survey found that the lack of adoption of specific practices was often related to the perception that the practice did not apply to the respondent's own operation.

The reported experiences of farmers who have adopted one or more of the practices reviewed in the survey could be used as evidence to convince the risk-averse that very few reported incurring costs as a result of adopting these practices. Moreover, a majority report achieving – and sometimes even exceeding – their expectations of economic benefits.

Further evidence that farmers will be open to the idea of environmentally-sound agricultural practices being potentially profitable, in addition to being "the right thing to do," is reflected in the finding that there is no clear consensus on the question of whether it is the farmer or the general public who benefits the most when farmers adopt these practices. At the same time, by adding together the proportion who say the general public benefits the most and the proportion who say it is the farmer's neighbours, one can conclude that a clear plurality do see the "big picture" in terms of the "spin-off" benefits for all Canadians.

In addition, Canadian farmers express high levels of interest in learning more about environmentally-sound land use practices and in actually adopting some of these practices. Although this is true even when farmers are reminded that this might mean investments of time or money on their part, the fact that the areas of most interest are improving water quality, soil enhancement and promoting rural values – over reducing greenhouse gas emissions, enhancing the variety and abundance of plants and animals, and providing habitat for wildlife – indicates, once again, that appeals to a healthy

"self-interest" would have a greater payoff than appeals to duty or altruism.

Furthermore, when farmers are asked about barriers to greater participation in environmentally-sound land management practices, financial considerations dominate the discussion, and when they are asked if a number of specific factors would convince them to adopt environmentally-sound land management practices, financial incentives outweigh other potential approaches.

The survey results indicate that there is still a great need for public education among farmers when it comes to building awareness of the term "ecological goods and services." However, there is a widespread understanding of the general concepts behind the term. As was noted in the Executive Summary of this report, the major information gaps appear to be in the following areas:

- educating farmers about specific environmentally-sound practices and how these can be applied to their agricultural operations;
- the economic benefits of specific environmentally-sound practices;
- the importance of taking into account the impact of land use practices on neighbouring lands and more broadly, the impact on the watershed;
- the ripple-out effects of environmentally-sound land management practices;
- the existence of environmental programs offered in both the public and private sectors; and
- the meaning and implications of the term "ecological goods and services."

Technical Committee

Survey Project Manager

Amy Seabrooke
Wildlife Habitat Canada

Survey Technical Committee

Robert Bailey
Delta Waterfowl

Cynthia Edwards
Ducks Unlimited Canada

Julie Grimard
Agriculture and Agri-Food Canada

Lynn McIntyre
Wildlife Habitat Canada

Allen Tyrchniewicz
Prairie Habitat Joint Venture

Shannon Watt
Canadian Federation of Agriculture

Ian Wishart
Keystone Agricultural Producers

Project Team - Environics Research Group Limited

E. Jane Armstrong, Senior Vice-President
Project Director

Mary Jane Lennon, Senior Associate
Project Co-ordinator

Steve Yudin
Data Manager

Methodology

The results of this survey are based on questions asked to a sample of 1,794 rural landowners across Canada. Qualified rural landowners:

- own or rent a minimum of ten acres/four hectares of land that generates gross annual farm or ranch receipts of $2,500 or more;
- are one of the people in the household primarily responsible for making long-term decisions affecting the land.

This 25-minute survey of rural landowners was conducted by telephone from February 27 to March 27 and April 17 to 23, 2006.

Sample selection

Sample for this survey was purchased from a supplier of occupational-based lists and consisted of sample designed to be randomized by province and proportionate to the distribution of working farms in the country. The original sampling method was designed to complete approximately 1,500 interviews with Canadian farmers (based on Statistics Canada definition); and an additional 294 surveys were completed to balance regions for weighting purposes.

The final sample was weighted based on proportionality of farms by region, based on current Statistics Canada data, as follows.

Province	Weight* %
Newfoundland	0.25
Prince Edward Island	0.85
Nova Scotia	1.40
New Brunswick	1.10
Quebec	13.20
Ontario	23.90
Manitoba	8.60
Saskatchewan	21.30
Alberta	21.90
British Columbia	7.50

* Provincial population as a percentage of the total population of farm in Canada

The final sample is distributed as follows.

	Weighted N	Unweighted N	Margin of Error
Atlantic Canada	65	101	9.8
Quebec	237	151	8.0
Ontario	429	343	5.3
Manitoba	154	117	9.1
Saskatchewan	382	651	3.8
Alberta	393	325	5.4
British Columbia	135	106	9.5
Total	1,794	1,794	2.3

Telephone interviewing

Fieldwork was conducted at Environics' central facilities in Toronto and Montreal. Field supervisors were present at all times to ensure accurate interviewing and recording of responses. During fieldwork, ten percent of each interviewer's work was unobtrusively monitored for quality control in accordance with the standards set out by the Marketing Research and Intelligence Association – MRIA (formerly the Canadian Association of Marketing Research Organizations – CAMRO). A minimum of five calls were made to a household before classifying it as a "no answer."

Completion results

A total of 1,794 interviews were completed. A sample of 1,794 persons within the population produces a sampling error of plus or minus 2.3 percent in 95 out of 100 samples. The margins are wider for demographic subsamples.

The effective response rate for the survey is ten percent: the number of completed interviews (1,794) divided by the total dialled sample (22,035) minus the non-valid/non-residential numbers, the numbers not in service and the numbers that presented a language barrier (3,856).

The actual completion rate is 17 percent: the number of completed interviews (1,794) divided by the number of qualified respondents contacted directly (10,737).

The compliance rate is 91 percent: the number of completed interviews divided by the number of interviews commenced.

	N	%
Total dialled sample	22,035	100
Not eligible	2,029	9
Non-valid/not in service	1,649	8
Language barrier	178	1
Subtotal	3,856	18
New base (22,035 – 3,856)	18,179	100
No answer/line busy/ respondent not available	7,442	41
Refusals	8,759	48
Mid-interview terminations	184	1
Subtotal	16,385	90
Net completions (18,179 – 16,385)	1,794	10
Completion rate (1,794/[18,179 – 7,442])		17
Compliance rate (1,794/[1,794 + 184])		91

Questionnaire

Survey of Rural Landowners – Ecological Goods and Services
National survey of 1,500 farmers and ranchers
PN5742
FIELD
February 2006

NOTE TO PROGRAMMER – PLEASE RECORD WHETHER PHONE NUMBER WAS USED IN PREVIOUS SURVEYS (AND WHICH SURVEY)

1S Hello, my name is _____ and I am calling from Environics Research Group. We are conducting a survey on issues concerning farmers and ranchers in Canada. Please be assured that we are not selling any products or services, nor are we acting on behalf of any private company.

NOTE TO INTERVIEWER If respondent asks who commissioned the survey, say that we can give that information at the end.

IF NECESSARY, ASK TO SPEAK TO AN ADULT

01 – Yes CONTINUE WHEN YOU HAVE AN ADULT
02 – Not available

2S Do you or does someone in your household own or rent rural land that consists of ten acres or more, or of 4 hectares or more?

01 – Yes
02 – No TERMINATE INTERVIEW

IF YES
Today, we are calling to talk about environmental issues as they pertain to rural land.

4Srt[1] a) Are you one of the people responsible for making the long-term management decisions regarding this land? [NOTE TO INTERVIEWER: if the land is rented out, the respondent who actually owns the land qualifies only if he/she makes the decisions as to how the land is managed]

01 – Yes, own and make, or help to make, decisions about how the land is managed GO TO D1
02 – Yes, rent land and make, or help to make, decisions about how the land is managed GO TO D1
03 - No, rent out most/all of it and don't make decisions
04 – No, don't make decisions

IF OPTIONS 3 OR 4 IN a)
b) May I please speak with one of the people responsible for making the longterm management decisions on the land?

01 – Yes [WAIT UNTIL THAT PERSON IS ON THE LINE AND GO TO Q1S
02 – No, person not here now SET UP AN APPROPRIATE TIME TO CALL BACK
03 – No, decision-maker not at this number

[1] previous surveys accepted options 1 and 2 as qualified respondents.
"rt" refers to related tracking, where the question wording has been altered

IF DECISION-MAKER RESIDES AT ANOTHER NUMBER, ASK

c) Would you mind giving me his or her first name and telephone number?

01 – SPECIFY _____ [Try new number and re-ask Question 1S]
02 – No TERMINATE INTERVIEW

D1 I would now like to ask you about the land that you currently own, or that you rent from someone else, and for which you make the management decisions. Does this land generate gross annual farm or ranch receipts of $2,500 or more? [NOTE TO INTERVIEWERS, includes any government payments/grants, before tax deductions]?

01 – Yes
02 – No TERMINATE INTERVIEW

D4 a) How many acres [or hectares] in total do you manage?

CODE ONE ONLY
01 – SPECIFY _____ acres
02 – SPECIFY _____ hectares

b) Which one of the following BEST describes your farm or ranch operation? (

READ – CODE ONE ONLY
01 – sole proprietorship
02 – partnership with family member
03 – partnership with someone outside family
04 – limited company or corporation
05 – cooperative or communal operation (e.g. Hutterite colony)
VOLUNTEERED
06 – combination PLEASE SPECIFY_____
98 – other PLEASE SPECIFY_____

D2 Which ONE of the following kinds of production BEST describes your farm or ranch operation? [NOTE – If more than one, probe as to which one provides the most income]

READ – CODE ONE ONLY [NOTE TO INTERVIEWERS – Do not read out words in brackets – refer to if asked]
01 – Field Crops (cereals, oilseeds, pulse crops, tame hay, row crops, tobacco, potatoes, sugar beets, other field crops)
02 – Milk
03 – Poultry (hens, chickens, turkeys, chicks, game birds, eggs, other)
04 – Cattle (cow/calf, backgrounding, feedlot)
05 – Pigs (farrow-to-finish, weanlings, finishing)
06 – Other Livestock (sheep, bison, horses, llamas, ostrich, etc)
07 – Horticulture (fruits, nuts, vegetables, greenhouse, nursery, etc)
VOLUNTEERED
08 – combination PLEASE SPECIFY_____
98 – Other SPECIFY _____
09 – N/A, do not farm/ranch
10 – land is rented out to someone else

2003
ASK ALL

1rt Specifically, when you think about your agricultural operation, what is the one issue that causes you the greatest concern?

01 – SPECIFY _____
VOLUNTEERED
02 – N/A, land is rented out to someone else

2 Speaking generally, how would you compare the opportunities for income on your farming or ranching operation between now and the past couple of years? Would you say that they…

READ AND ROTATE 1 AND 2 – CODE ONE ONLY
01 – improved?
02 – worsened?
03 – or did they stay about the same?

3 And what do you think will happen with your farming or ranching income opportunities over the next couple of years? Do you think that they will …

READ AND ROTATE 1 AND 2 – CODE ONE ONLY
01 – improve?
02 – worsen?
03 – or stay about the same as now?

D5 a) Currently, is any of your land growing field crops, Christmas trees, or orchards?

01 – Yes
02 – No

IF YES TO a)
b) How many acres [or hectares] are in field crops, Christmas trees, or orchards?

READ IF NECESSARY
01 – Less than one acre or half a hectare
02 – An acre or more SPECIFY _____ acres
03 – More than half a hectare SPECIFY _____ hectares

ASK ALL

D6 a) Currently, is any of your land covered with forest or woodland? [NOTE – includes sugar bushes and plantations that are not Christmas trees]

01 – Yes [NOTE – Probe to make sure that these are not Christmas trees or orchards – tell respondent that these are considered “crops”]
02 – No land covered with forest

IF YES TO a)
b) How many acres [or hectares] are covered with forest or woodland?

READ IF NECESSARY
01 – Less than one acre or half a hectare
02 – An acre or more SPECIFY _____ acres
03 – More than half a hectare SPECIFY _____ hectares

ASK ALL

D7 Currently, is any of your land left open as pasture or grazing land?

01 – Yes
02 – No

IF YES TO a)

b) How many acres [or hectares] are left open as pasture or grazing land?

READ IF NECESSARY
01 – Less than one acre or half a hectare
02 – An acre or more SPECIFY _____ acres
03 – More than half a hectare SPECIFY _____ hectares

ASK ALL

D8 a) Do you currently have any wetlands, that is, land that is covered by water, either permanently or seasonally? .

PROBE
01 – Yes,
02 –No

IF OPTION 1 IN a)

b) How many acres [or hectares] are wetlands?

READ IF NECESSARY
01 – Less than one acre or half a hectare
02 – An acre or more SPECIFY _____ acres
03 – More than half a hectare SPECIFY _____ hectares

ASK ALL

D9 Not counting any wetland you might own, is any of your land CURRENTLY left open as idle land?

01 – Yes
02 – No

IF YES TO a)

b) Not counting wetlands, how many acres [or hectares] of your land are left open as idle land?

READ IF NECESSARY
01 – Less than one acre or half a hectare
02 – An acre or more SPECIFY _____ acres
03 – More than half a hectare SPECIFY _____ hectares

ASK ALL

4 a) When it comes to the introduction of new products, does your farming or ranch operation tend to…?

READ AND ROTATE IN ASCENDING OR DESCENDING ORDER – CODE ONE ONLY
01 – be among the first to try something new
02 – wait until a FEW others have tried a new product
03 – wait until a new product has been WELL tested
04 – stay with the same products you've used in the past

b) When it comes to the introduction of new farming or ranching techniques, does your farming or ranch operation tend to…?

READ AND ROTATE IN ASCENDING OR DESCENDING ORDER – CODE ONE ONLY
01 – be among the first to try something new
02 – wait until a FEW others have tried a new technique
03 – wait until a new technique has been WELL tested
04 – stay with the same techniques you've used in the past

2003
ASK ALL

5t When you make decisions about activities on your farm or ranch operation, does the effect on your neighbours' land have an impact on your land use decisions?

01 – yes, has an impact on decision
02 – no, has no impact
VOLUNTEERED
03 – N/A, land is rented out to someone else

6 I would now like to ask you about some specific management and land use practices. For each one, can you please tell me if you have ever done this, if you plan to do this in the future, or is it not applicable to your land.

READ AND RANDOMIZE

ASK ALL

a) Buffer-stripping or riparian zone management

PROBE
01 – yes, doing this now
02 – not doing this now, but have in past
03 – have never done this
04 – plan to do it in the future
05 – not applicable to your land
VOLUNTEERED
06 – do not know what this is

b) Tree-planting to create shelterbelts
c) Restoration or conservation of natural areas

IF OPTIONS 1, 2, OR 3 IN D2

d) Rotational grazing
e) Subsurface manure application (this means injection or some form of mixing)
f) Manure storage to prevent run-off
g) Nutrient management plans
h) Change in feeding to reduce the level of Phosphorous or Nitrogen in manure

IF OPTIONS 4, 5, 6 OR 7 IN D2

i) Permanent cover of marginal crop land
j) No till or reduced tillage
k) Nutrient management plans
l) Integrated pest management
m) Crop rotations to reduce nutrient application and/or improve soil quality
n) Postponing the harvest in the interest of wildlife habitat

IF OPTIONS 1 0R 2 IN ANY PART OF 6

7 Thinking again about the management and land use practices I just asked you about, would you say that your decision to take action on any of these resulted in any economic benefits for yourself as a farmer or rancher?

PROBE– CODE ONE ONLY
01 – yes, more than expected
02 – yes, but less than expected
03 – yes, about what was expected
04 – no benefits
05 – no, it resulted in costs

ASK ALL

8 a) When a farmer or rancher such as yourself adopts practices that benefit the environment, which ONE of the following do you think benefits MOST?

READ AND RANDOMIZE – CODE ONE ONLY
01 – the farmer/rancher personally
02 – the neighbours in the surrounding community
03 – the general public
VOLUNTEERED
03 – all equally
04 – combination SPECIFY _____
05 – none of these

IF OPTIONS 1-3 IN a)

b) And who do you think benefits the LEAST?

READ AND ROTATE THE TWO OPTIONS NOT CHOSEN IN a)
01 – the farmer/rancher personally
02 – the neighbours in the surrounding community
03 – the general public
VOLUNTEERED
03 – all equally
04 – combination SPECIFY _____
05 – none of these

ASK ALL

9 Are you very, somewhat, not very or not at all interested in …

a) learning more about farm management and land use practices that benefit the environment and society at large?

01 – very interested
02 – somewhat interested
03 – not very interested
04 – not at all interested

b) actually adopting, for yourself, new management and land use practices that benefit the environment and society at large, even if this MIGHT mean investments of time or money on your part?

IF OPTIONS 1 0R 2 IN 9b

10 You've said that you're interested in adopting new management and land use practices. Keeping in mind that you MIGHT have to invest some time, and POSSIBLY some money, which of the following areas, if any, would you consider taking action on….

READ AND RANDOMIZE – CODE ALL THAT APPLY
01 – enhancing soil productivity
02 – improving water quality
03 – reducing greenhouse gas emissions
04 – enhancing the variety and abundance of plants and animals on your land
05 – providing habitat for wildlife
06 – promoting rural values and the rural way of life
VOLUNTEERED
98 – Other SPECIFY_____

ASK ALL

11 a) Are you aware of any environmental programs, offered by either governments or private organizations, for which you would be eligible?

01 – yes
02 – no

IF OPTION 1 IN a)

b) Are you currently participating in these programs, or have you done so in the past?

01 – yes, currently
02 – not now, but have in the past
03 – have never participated

IF OPTION 1 IN b)

c) What are the MAIN two or three reasons why you are participating in these programs?

01 – SPECIFY _____

IF OPTIONS 2 OR 3 IN b)

d) What are the main two or three reasons you are not currently participating in any of these programs?

01 – SPECIFY _____

ASK ALL

12 a) Are you familiar with the term “ecological goods and services”?

01 – yes
02 – no

IF OPTION 1 IN a)

b) Can you BRIEFLY describe what this term means to you?

01 – SPECIFY _____

IF OPTION 2 IN a)

c) Through certain management and land use practices, farmers and ranchers are able, either directly or indirectly, to provide goods and services that benefit the general public. Does this description of ecological goods and services sound familiar to you?

01 – yes
02 – no

ASK ALL

13 What would you say are the MAIN factors that get in the way of farmers and ranchers like yourself undertaking the kind of environmentally-sound management and land use practices that, directly or indirectly, provide benefits to the general public?

01 – SPECIFY _____

14 a) Thinking now about your current management and land use activities, do you see these as providing broader benefits to the general public?

01 – yes
02 – no

IF OPTION 1 IN a)

b) Can you tell me what two or three of these benefits might be?

01 – SPECIFY _____

ASK ALL

15 How much responsibility do you think farmers and ranchers like yourself have when it comes to undertaking management and land use practices that benefit the environment even when they are not compensated financially for doing so?

READ IN ASCENDING OR DESCENDING ORDER – CODE ONE ONLY
01 – a great deal of responsibility
02 – some responsibility
03 – little responsibility
04 – no responsibility

16 If a financial support program were to be offered to farmers and ranchers who agree to manage their land for environmental objectives, should the program …

READ AND ROTATE
01 – be extended to those who have undertaken environmentally-sound land management activities in the past, even if that means there is less money to extend the program into the future
02 – be limited to those making commitments after a certain date, so there will be more money for those undertaking environmentally-sound management in the future

17 For you personally, which of the following factors, if any, would likely CONVINCE you to adopt environmentally-sound land management practices?

READ AND RANDOMIZE – CODE ALL THAT APPLY
01 – financial incentives, such as direct payments from a government or other program, or tax credits
02 – a general sense of pride in being a steward of your land
03 – if the government set requirements for environmental farm plans
04 – information on the impacts of farming or ranching practices on the environment
05 – new or improved technology for crops and/or livestock
06 – better access to technical assistance and extension services
07 – if your peers undertook these kinds of practices
08 – higher prices for agricultural commodities produced with sound environmental management practices
09 - if your farm or ranch income were higher than it is
98 – Other SPECIFY_____

TELL ALL
And now, I'd like to ask you some questions about you and your household. Please be assured that all your responses will be kept entirely anonymous and absolutely confidential.

ASK ALL
D3 What year were you born?

01 – SPECIFY _____

D10 Do you have regular or easy access to the Internet?

01 – yes
02 – no

ASK ALL

D11 What is the highest level of education that you have reached?

DO NOT READ – CODE ONE ONLY
01 - Some elementary
02 - Completed elementary
03 - Some high school
04 - Completed high school
05 - Community college/ vocational/ trade school/ commercial/ CEGEP
06 - Some university
07 - Completed university
08 - Post graduate university/professional school

D12 What is your primary occupation? [IF MORE THAN ONE, the job that generates the most income]

READ
01 – Farmer/rancher (e.g. someone whose gross annual farm receipts are $2,500 or more)
02 – Skilled tradesperson (e.g. welder, plumber, electrician)
03 – Professional (e.g. teacher, engineer, lawyer)
04 – Retired NOTE: if retired farmer, code as farmer
98 – Other SPECIFY _____

D13 a) For statistical purposes only, we need information about your household income. All individual responses will be kept confidential. What was your total gross household income before taxes for 2005? [ASK INCOME FOR 2004 IF 2005 INCOME UNKNOWN]

READ IF NECESSARY
01 – Under $25,000
02 – $25,000 to $49,999
03 – $50,000 to $99,999
04 – $100,000 to $149,999
05 - $150,000 or more
VOLUNTEERED
06 – not stated/refused

D14 a) Which category best describes the total farm/ranch sales you received in 2005, including government payments, but before deductions?

READ
01 – Under $10,000
02 – $10,000 to $24,999
03 – $25,000 to $49,999
04 – $50,000 to $99,999
05 – $100,000 to $149,999
06 - $150,000 to $199,999
07 - $200,000 to $249,999
08 - $250,000 to $499,999
09 - $500,000 or more
VOLUNTEERED
10 – not stated/refused

b) Approximately, what proportion of your total household income is derived from the land or the farm that you own or manage?

READ – CHOOSE ONE ONLY
01 – all or most of it
02 – about half
03 – none or hardly any
VOLUNTEERED
98 – Other SPECIFY _____

D15 Can you please give me your postal code [ACCEPT FIRST THREE DIGITS IF THAT'S ALL THAT'S OFFERED]

s01 – PLEASE SPECIFY_____

NOTE TO INTERVIEWER For those who asked, the survey was commissioned by Wildlife Habitat Canada (a non-profit, conservation organization).